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**Reframing the Neolithic**

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**Abstract**

*Keywords: post-processualism, Neolithic, metanarrative, individual, postmodernism, reflexivity, epistemology, Enlightenment, modernity, holistic.*

*In advancing a critical examination of post-processualism, the thesis has – as its central aim – the repositioning of the Neolithic within contemporary archaeological theory. Whilst acknowledging the insights it brings to an understanding of the period, it is argued that the knowledge it produces is necessarily constrained by the emphasis it accords to the cultural. Thus, in terms of the transition, the symbolic reading of agriculture to construct a metanarrative of Mesolithic continuity is challenged through a consideration of the evidential base and the indications it gives for a corresponding movement at the level of the economy; whilst the limiting effects generated by an interpretative reading of its monuments for an understanding of the social are considered. Underpinning these constraints is the conceptual privileging of the individual consequent upon the post-processual reaction to the totalising frameworks of modernist knowledge and the metanarratives of progress they construct – as exemplified in the economic reading of Childe. In examining the form of this reaction, the wider post-processual transposition of postmodernism within contemporary archaeological theory is also considered. In utilising Giddens' concept of reflexivity, it is argued that rather than the 'cultural turn' itself, it is the inflection of the epistemological frameworks of the Enlightenment with a teleological reading of the past as progress that represents the postmodern within contemporary archaeological theory and it is through this understanding of postmodernism as expressing the capacity that modernity has to be self-aware that the conditions are established for the recovery of the Neolithic as a holistic object.*

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## **Chapter 1. Archaeology, Modernity and the Neolithic.**

### **1.1 Modernity and the Enlightenment framing of archaeology.**

In breaking with the theological frameworks of pre-modern understanding, the Enlightenment stands at 'the threshold of modern thinking' (Hamilton 1992: 57) concerning the nature of society and the realm of the social. The conditions informing the emergence of this new mode of understanding had already been given in the astronomic and scientific advances of the sixteenth and seventeenth centuries and the way these not only challenged the traditional cosmologies of scripturally-derived frameworks of belief but also demonstrated the superiority of science as a higher form of knowledge through its ability to 'create secure truths based on observation and experiment' (Hamilton 1992: 27). It was this ability of science to generate objective statements free from the effects of prejudice and superstition that informed the Enlightenment identification of science as the key to expanding all forms of knowledge for just as the application of a reasoned and empirically based knowledge had opened up an understanding of the natural world through the discovery of its underlying laws of regulation so, too, could the social. In constituting the social as a distinct and separate reality open to rational forms of investigation, the Enlightenment consequently 'gave definition to the ... idea of modernity' (Hall 1992a: 2) and, in so doing, established the matrix for the subsequent emergence of the social sciences as modern forms of thought concerned with the secular understanding of the social.

As a discipline concerned with the scientific investigation of the past, archaeology was both formed and framed within the epistemological context of this matrix. Indeed, as Thomas notes, 'archaeology took shape within the conceptual framework of ... modernity' (Thomas 2004: 149) and 'one of the most significant ways in which archaeology finds itself embedded in modernity lies in its adherence to a conception of knowledge that privileges method' (Thomas 2004: 55). It is this privileging of method as a form of knowledge production specific to modernity that explains the movement out of antiquarianism for rather than confining itself to the description of those material remains existing within the present, archaeology was instead concerned with

the way such remains could be used to systematically investigate the past and in so doing reveal its underlying principles of order. To achieve this, archaeological investigative practice centred itself upon the rational procedures of modernist analytical methodologies designed to penetrate and fragment the reality of the past through the isolation of its constituent elements, whose characteristics, once determined, could then be recombined to produce knowledge of its overall complexity (Thomas 2004: 59).

The form assumed by these methodologies had itself been derived from the field of natural history (Thomas 2004: 66). Here the emergence of classificatory structures appropriate to the categorisation of species and genera in terms of their defining characteristics had not only rendered the complexity of life malleable to the rational procedures of analytical science but, through the sequential positioning of its diverse forms resulting from the presence or absence of particular attributes, reproduced its underlying principles in thought. It was this capacity of science to reconstruct the hidden order of nature in knowledge that informed the application of these practices to the investigation of material culture for just as the ordering of species and genera had revealed the 'tree of life', so the grouping of artefacts around the presence or absence of particular traits was seen as a mechanism for accessing the hidden reality of the past (Thomas 2004: 66). As a result archaeological investigative practice structured itself around the typological classification of material culture and the way this permitted the identification of chronological sequences congruent with the real order of the past.

Accompanying this methodological structuring of archaeology as a modernist discipline was an emergent conception of material culture as expressing the essential character of a people as the 'construction of artefact typologies, and their elaboration into chronological schemes and regional sequences, was now understood as a means of identifying cultural entities; and of observing their behaviour in time and space' (Thomas 2004: 66). Informing this understanding was the pluralized conception of culture advanced by Herder as referring to the distinctive ways of life common to different social groups such that culture was itself both specific and variable through the way it necessarily articulated the

shared traditions, values and meanings of subjective association (Bocock 1992: 232). It was this normative reading of culture that was transposed into archaeology through the notion of an 'archaeological culture' and is encapsulated in the definition accorded to it by Childe as a complex of associated traits characterised by 'certain types of remains – pots, implements, ornaments, burial rites, house forms – constantly recurring together' (Childe 1929: v-vi). For Childe, the presence of such a complex was seen as denoting 'the material expression of ... a people' (Childe 1929: vi) whose history could not only be tracked spatially in terms of the reach attained by its corresponding traits, but temporally through the positioning of its forms within the wider patterns of typological variation emanating from the chronological sequencing of material culture.

It is this movement to an understanding of material culture as delimiting the spatial and temporal presence of an underlying population that informs the emergence of culture-history as the dominant paradigmatic framework in archaeology during the first half of the twentieth century. Underpinning this approach was a normative conception of material culture as the concrete manifestation of an underlying population whose signature could not only be identified and traced through the notion of an 'archaeological culture', but used to elaborate a historical methodology centred upon the production of distribution maps and chronological charts whose forms of spatial and temporal representation replicated, in knowledge, the origins, movements and interactions of past populations for 'just as the spatial distribution of artefact styles identified the extent of bounded social or cultural entities in the past' (Thomas 2004: 160), so stylistic change in the form assumed by such artefacts 'demonstrated their succession, as migrations, invasions, diffusion and cultural drift took place' (Thomas 2004: 160).

It is through this methodological framework that the Neolithic was constructed as an object of modernist knowledge and received its most developed expression in the broad synthesis of European prehistory presented by Childe in *The Dawn of European Civilization*, first published in 1925. Within this synthetic reading, the prehistoric development of Europe was predicated upon



the effects generated through the diffusion, from its point of inception in the Orient, of the Neolithic to southern Europe and its subsequent northward spread along the corridors of the Rhine and the Danube (Trigger 1980: 35). However, rather than representing the uniform manifestation of a common set of elements centred upon the presence of agriculture, pottery and a polished stone technology, this movement was instead characterised by diversity in the forms assumed by these elements such that, for Childe, there was 'no single Neolithic culture, but a number of distinct cultures' (Childe 1954: 57) each 'distinguished by the varieties of plants cultivated or ... animals bred, by a different balance between cultivation and stock-breeding, by divergences in the location of settlements, in the plan and construction of houses, the shape and material of axes and other tools, the form and decoration of ... pots, and by ... disparities in burial rites ... and styles of art' (Childe 1954: 70).

For Childe, this diversity in the form assumed by the Neolithic informed its understanding as 'a mosaic of sharply delineated cultural groups' (Trigger 1980: 53) whose histories could be tracked through the material signatures emanating from these 'divergent applications of common basic traditions' (Childe 1954: 57). To achieve this Childe positioned the Neolithic within the methodological framework of the 'archaeological culture' and the way its understanding as a recurrent set of interrelated traits not only enabled its constituent cultures to be differentiated on the basis of their underlying characteristics, but simultaneously fixed them in time and space. In establishing the duration and limits of these cultures, Childe was consequently not only able to capture the overall complexity of the Neolithic in thought but, in conceiving its signatures as the material expression of fundamentally distinct peoples, reproduce the form of its spread through the recovery of those trajectories emanating from the movements and interactions of its underlying populations.

## 1.2 Agriculture, progress and the Neolithic as an economic revolution.

The significance of *The Dawn of European Civilization* is contained not only in the way it exemplifies the Enlightenment belief in the capacity of science to render its object knowable through the rational procedures of an analytical

methodology but in the way its title implicitly acknowledges the wider Enlightenment inflection of modernist knowledge with underlying assumptions of progress. Informing this broader structuring of knowledge was the understanding modernity derived of itself through its relations of encounter with 'the other' during the period of European expansion and conquest between the fifteenth and nineteenth centuries. Underpinning these relations was the idea of difference and the way this enabled modernity to conceive itself as the culmination of progress through the representational strategies it used to construct an understanding of 'the rest' in knowledge (Hall 1992b: 310-314). Central to these strategies was the notion of the 'ignoble savage' as depicting the condition of humanity in an original state of nature and its associated use to elaborate a linear conception of social development centred upon the indigenous populations of non-western social formations, whose presence established a prism through which it was possible to see 'a pattern of the first ages in ... Europe' (Locke, cited by Hall 1992b: 312) such that, for Locke, 'in the beginning all the World was America' (cited by Hall 1992b: 312).

It was this understanding of social development that was expressed in Enlightenment historiography and the emphasis it placed upon a stadial conception of progress that was universal to all societal forms. Although different strands of the Enlightenment differed over the form assumed by these stages, movement between them was increasingly understood in economic terms such that, for Meek, in 'its most specific form, the theory was that society had ... progressed over time through four more or less distinct and consecutive stages, each corresponding to a different mode of subsistence, these stages being defined as hunting, pasturage, agriculture and commerce' (cited by Hall 1992b: 313). Whilst Europe was regarded as having passed through all these stages, the societal forms of 'the rest' were instead viewed by the Enlightenment as representing the initial phases of such development and consequently occupied a subordinate position within this generalised understanding of the history of 'rude and refined nations'.

For archaeology the significance of this historiographic reading of 'the other' lies in the deepening of its temporal projection and the way this caused the past to

be linked to the present through a narrative of progress that gave history a directional form. However, in conceiving history as the unfolding of progress, it became necessary to identify the origin of that dynamic responsible for initiating the movement out of savagery as the primordial condition of humanity. For the Enlightenment such an origin was given in the emergence of agriculture (Thomas 2004: 91) and the way its subordination of the natural world was understood as not only transcending the conditions of an original state of nature through its breaking of the dependencies of the social world upon it; but, through its separation of the social and the natural, simultaneously instigated a trans-historic dynamic of change in the mode of subsistence whose culmination was the present.

It is this association of agriculture with the emergence of a historically progressive dynamic that frames *The Dawn of European Civilization* and the way this causes its understanding of the prehistoric development of Europe to reproduce the historiography of the Enlightenment through a conception of the Mesolithic as the manifestation of an original state of nature. This is because in possessing a subsistence strategy centred upon the foraging of those resources available in the natural world, the Mesolithic was seen by Childe as being opposed to history through the passivity of its relation with the external world and the way this rendered it devoid of any dynamic of change. For Childe, it was this absence of a progressive dynamic that is transformed through the emergence of agriculture and the way its modification of the natural world is seen as initiating the movement to history through its transcendence of the limits imposed by an economy of hunting and gathering on the social as a participant 'active ... with nature' (Childe 1954: 55) rather than one that was merely 'a parasite on ... nature' (Childe 1954: 30).

In advancing this understanding of the Mesolithic and the nature of its relation with agriculture, Childe effectively positions the Neolithic within the broad distinction made by Marx concerning the use of land as either a subject or instrument of labour. Underpinning this distinction is the materialist conception of labour as 'the prime basic condition for all human existence' (Engels 1973a: 354) since it is through the expenditure of labour that the conditions of life are

secured. However, for Marx, the form assumed by labour differed according to the relation it occupied with the external world for under conditions of land as a subject of labour, 'the means of subsistence ... are ... spontaneously provided by Nature' (Marx 1977a: 174) ready to hand and consequently exist independently of the individual such that 'labour merely separates from immediate connexion with their environment' (Marx 1977a: 174).

It is these 'primitive ... forms of labour ... in its first instinctive stage' (Marx 1977a: 173-174) that, for Marx, were dissolved through the movement to land as an instrument of labour and in so doing gave history its point of origin for by 'acting on the external world and changing it' (Marx 1977a: 173), 'man ... opposes himself to Nature as one of her own forces ... in order to appropriate Nature's productions in a form adapted to his own wants' (Marx 1977a: 173). As a result:

"... Nature becomes one of the organs of his activity, one that he annexes ... The earth itself is an instrument of labour, but when used as such in agriculture implies a whole series of other instruments and a comparatively high development of labour ... In the earliest period of human history domesticated animals, i.e., animals which have been bred for the purpose, and have undergone modifications by means of labour, play the chief part as instruments of labour along with specially prepared stones, wood, bones, and shells. The use and fabrication of instruments of labour ... is specifically characteristic of the human labour-process, and ... distinguish different economic epochs." (Marx 1977a: 175)

It is this movement to the use of land as an instrument of labour that explains the centrality accorded to the Orient for the prehistoric development of Europe as here the effects of dessication resulting from the climatic changes associated with the immediate post-glacial were seen by Childe as modifying the relation of the social to the natural world as human and animal populations became increasingly concentrated around remaining sources of water (Childe 2003: 77). Within these conditions of enforced juxtaposition, a symbiotic relation was formed between the social and natural worlds as 'closer relationships between people, plants and animals would develop' (Thomas 2004: 93), such that in

'becoming more familiar with the attributes and life-cycles of various species, human beings would gradually have come to influence and ultimately control their reproduction' (Thomas 2004: 93).

It was through this symbiosis that the conditions were established for the subsequent emergence of agriculture and, for Childe, its inception was considered fortuitous in that 'the combination of the appropriate wild species and climatic circumstances would have been limited to the area where Africa and Asia met' (Thomas 2004: 93). However, once established, it provided the dynamic for lifting Europe out of savagery as the subsequent diffusion and spread of its elements through the Neolithic cultures of Europe was seen by Childe as not only rupturing the limits placed on progress by a Mesolithic reproductive base centred upon the use of land as a subject of labour but, through its process of domestication, altered the relation occupied by labour to the external world, thereby initiating the emergence of a trans-historic dynamic of change centred upon the use of land as an instrument of labour.

In according the Neolithic with a historically progressive dynamic, the emergence of agriculture was consequently seen by Childe as representing 'a crucial turning-point in ... history' (Trigger 2006: 323) through the movement it effects from a '*gathering ... to ... a ... food-producing economy*' (Childe 1954: 30) and it is this that frames its understanding as an 'economic revolution'. This is because in giving 'man control over his own food supply' (Childe 2003: 66), domestication was seen by Childe as increasing the carrying capacity of the land through the technical innovations brought by agriculture to the sphere of production. For Childe, it was this development in the underlying forces of production that rendered the Neolithic 'a universal historical stage in the progress towards ... civilization' (Childe 2003: 84) as the demographic expansion resulting from that increase in the productivity of labour made possible by domestication established the conditions for the subsequent emergence of a division of labour whose 'separation of town and country ... begins with the transition from barbarism to civilisation' (Marx 1975: 127). It was this transition that, for Childe, was marked by the 'urban revolution' of the late pre-historic period and its appearance expressed the demographic release

of a progressively expanded population whose reproductive requirements could be met through the capacity of agriculture to generate a surplus product (Childe 2003: 35-36).

In locating the 'urban revolution' and its conditions of emergence in those advances brought by agriculture to the sphere of production, Childe consequently positioned the Neolithic within the broader explanatory framework of historical materialism as a 'whole conception of world history' (Engels 1973b: 370) centred upon the determinant nature of production and its form of historical development. It was the formulation of an approach appropriate to this investigation of production as a trans-historical object that informed the methodological framework of the 1857 *Introduction* to the *Grundrisse: Foundations of the Critique of Political Economy* for whilst the analysis of production has its point of departure in those characteristics relating to the first 'tribes, races, etc' (Marx 1973a: 110) capital, as a mode of production, expressed its most historically developed form and consequently established the basic theoretical structure necessary for the understanding of its previous stages since:

"Bourgeois society is the most developed and the most complex historic organisation of production. The categories which express its relations, the comprehension of its structure, thereby also allows insights into the structure and the relations of production of all the vanished social formations out of whose ruins and elements it built itself up ... Human anatomy contains a key to the anatomy of the ape. The intimations of higher development among the subordinate animal species, however, can be understood only after the higher development is already known. The bourgeois economy thus supplies the key to the ancient, etc." (Marx 1973a: 105)

In elaborating this logic of investigation, *Capital* consequently represents the completion of a restricted object in the wider understanding of production as a trans-historical object. Although this final object was never realised by Marx, the elements for its construction were, however, given through the theoretical

structure of *Capital* and the way this directed the analysis of its categories to the demonstration of its transitory nature, such that history was conceived as a series of successive stages, whose forms and contradictions marked movement in the wider evolution of production as a global object. In establishing the theoretical structure appropriate to the investigation of past historical periods, *Capital* consequently represents the initial elaboration of the materialist theory of history, whose basic conceptual framework was first outlined by Marx in the 1859 *Preface to A Contribution to the Critique of Political Economy* as follows:

“In the social production of their existence, men ... enter into definite relations, which are independent of their will, namely relations of production appropriate to a given stage in the development of their material forces of production. The totality of these relations of production constitutes the economic structure of society, the real foundation, on which arises a legal and political superstructure and to which correspond definite forms of social consciousness ... At a certain stage of development, the material productive forces of society come into conflict with the existing relations of production ... Then begins an era of social revolution. The changes in the economic foundation lead ... to the transformation of the ... superstructure ... In broad outline, the Asiatic, ancient, feudal and modern bourgeois modes of production may be designated as epochs marking progress in the economic development of society.” (Marx 1977b: 20-21)

It is this understanding of history as a succession of historically specific modes of production that was subsequently linked by Engels to the ‘archaic’ formations of the pre-historic period and the way these sequentially express the emergence of production as a trans-historic object through the progressive separation of labour from an original state of nature. It was this that, for Engels, the generalised movement from ‘savagery – the period in which the appropriation of natural products, ready for use, predominated’ (Engels 1973c: 465) to ‘barbarism – the period in which knowledge of cattle breeding and land cultivation was acquired, in which methods of increasing the productivity of nature through human activity were learnt’ (Engels 1973c: 465) denoted and

through its development of the underlying forces of production, established the conditions for the subsequent emergence of a division of labour whose relations of exchange delineate the class-based formations of the historic period as the principal epochs of 'civilisation – the period in which knowledge of the further working up of natural products, of industry proper, and of art was acquired' (Engels 1973c: 465).

It is this understanding of production as a trans-historic object that Childe articulates through the economic and urban 'revolutions' of the pre-historic period and the way these inform a materialist reading of 'the archaeological record ... as documenting a directional process' (Childe 1958: 72) which 'is most obvious in the economic sphere' (Childe 1954: 29). This is because it was 'in this domain' (Childe 1954: 29) that 'men ... steadily increased their control over ... nature' (Childe 1958: 72) and it was this progressive subordination of the natural world that, for Childe, gave the Neolithic economic significance since it was in the separation of production from the economic conditions of savagery that the origins of this directional trend were located. It is this that is expressed through the movement to barbarism and in representing the pre-historic emergence of production as a trans-historic object, initiates a dynamic of change whose subsequent unfolding informed the emergence of the 'urban revolution' and, with it, the movement to civilisation and the historic period.

In positioning the economic and urban 'revolutions' within the economic stages of savagery, barbarism and civilisation, Childe consequently conjoins history with pre-history through a shared narrative of change centred upon the trans-historical development of production. As a result archaeology is conceived by Childe as a source of historical understanding for in extending 'written history backwards' (Childe 2003: 9), archaeology has the capacity to 'follow down to the present day the working out of trends discerned ... in prehistory' (Childe 1954: 13). It is these trends that are exhibited through the economic and urban 'revolutions' of the pre-historic period and, in disclosing 'cumulative changes proceeding in one ... direction ... towards recognizable results' (Childe 1954: 13), reproduces the wider Enlightenment inflection of modernist knowledge with



underlying assumptions of progress and the way this is expressed economically through the conceptual framework of historical materialism. As a result, history is read lineally through the trajectory of its origin, such that the present is known through its relation to the past and it is through this articulation of Enlightenment historiography that the significance accorded by Childe to the emergence of agriculture as an 'economic revolution' is contained and the way this underwrites a conception of the Neolithic as the pre-historic dawning of modernity and civilisation.

### 1.3 Postmodernism and the Neolithic as a symbolic revolution.

It is this understanding of the Neolithic, together with its form of construction as an object of modernist knowledge, that has subsequently been challenged through the emergence of postmodernism as a critical reaction to the Enlightenment and the emphasis it placed on science and progress. Informing this reaction is the understanding modernity derives of itself through the relations it establishes with the past for in contrast to the fixed experiential frameworks of pre-modern society, modernity was instead characterised by the emergence of a new framework of subjective experience centred upon the constantly changing nature of the social world. It is this movement to a qualitatively new mode of social existence that, for Hall, represents 'the real transition to modernity' (Hall 1992a: 15) for 'essential to the idea of modernity is the belief that everything is destined to be speeded up, dissolved, displaced, transformed, reshaped' (Hall 1992a: 15) such that, for Marx:

“Constant revolutionising of production, uninterrupted disturbance of all social conditions, everlasting uncertainty and agitation distinguish the bourgeois epoch from all earlier ones. All fixed, fast-frozen relations ... are swept away, all new-formed ones become antiquated before they can ossify. All that is solid melts into air ...” (Marx 1973b: 38)

It is this permeation of the social with unrelenting change that gives modernity its sense of distinctiveness and shapes its understanding of the past as something that was inherently different from that of the present. Similarly, it is

through this notion of difference that the past is not only rendered external to modernity (Lyotard 1984: 22), but simultaneously constituted as an object of knowledge, for whilst pre-modern society has 'a past that is embedded in social relationships and performed in the reiteration of tradition' (Thomas 2004: 79), modernity is severed from and consequently has a 'need to remember its past' (Lyotard 1984: 22) since it is through its recovery that the constant flux of its lived experience is both anchored and given coherence.

It is this relation of exteriority that explains the objectification of the past in Enlightenment historiography and its positioning within a modernist conception of time as lineal and progressive in form. This is because it is through a past that can be demonstrated to have occurred that modernity is able to contextualise itself, and it is this that the Enlightenment secures through the emphasis it accords to science as a superior form of knowledge since science alone is independent of its social context and consequently capable of producing objective understanding (Thomas 2004: 41). As a result it is through science that the past is recovered for modernity, and it is this that underpins the stadial reading of history advanced by the Enlightenment and the way this positions the present as the temporal outcome of an underlying causality whose progressive unfolding can be tracked scientifically through the trajectory of the past.

It is this teleological reading of history as the progressive unfolding of an underlying dynamic whose end is necessarily inscribed in its beginning that, for Lyotard, informs the emergence of a post-modern condition in knowledge as 'incredulity toward metanarratives' (Lyotard 1984: xxiv). Underpinning this condition is the cultural privileging of science as a higher form of knowledge under modernity and the way its claim to objective understanding differentiates it from the locational narratives of contextual experience. However, it is this claim to objective understanding that is seen by Lyotard as resting on a fundamental myth since science, of itself, 'cannot know ... that it is ... true knowledge' (Lyotard 1984: 29). Instead science can only assert its claim to truth through a legitimating framework of philosophy (Lyotard 1984: xxiii) since it is through philosophy rather than science as such that the nature of truth is

ultimately determined. As a result science is seen by Lyotard as operating within higher-level narratives whose philosophical histories render its knowledge claims legitimate through reference to some wider overarching process 'such as the dialectics of Spirit, the hermeneutics of meaning, the emancipation of the rational or working subject, or the creation of wealth' (Lyotard 1984: xxiii).

It is this underlying relation of science and philosophy within modernist knowledge that the Enlightenment articulates through its historiography and the way this recovers the past through a metanarrative of progress centred upon the understanding that modernity has of itself as the 'maturation of some underlying process' (Thomas 2004: 84-85). It is this narrative reading of the past as the inner working of some underlying logic that not only underwrites the teleological inflection of Enlightenment philosophical history, but finds its reproduction through the conceptual framework of historical materialism and the way this advances a science of history centred upon the trans-historical development of production. Similarly, it is this materialist reading of the past as a metanarrative of progress that is subsequently transposed into archaeology through the emphasis accorded by Childe to an understanding of the Neolithic as an 'economic revolution' and the way this causes the writing of prehistory to become centred upon 'a conceptual division between hunter-gatherers as others, and later populations who are ... gradually developing towards urban society' (Thomas 1996a: 1).

It is this narrative reading of the past that informs the emergence of postmodernism as a condition of uncertainty in the current state of knowledge for, in contrast to the philosophical histories of modernist understanding, history not only exhibits continuity in its form of development, but is also punctuated with periods of discontinuity. As a result rather than 'unfolding according to some necessary law or logic towards a prescribed and inevitable end' (Hall 1992a: 9), history is instead marked by the presence of breaks, ruptures and reversals as 'many events seem to follow no rational logic but to be more the contingent effects of unintended consequences' (Hall 1992a: 9) whose outcomes are contrary to the perceived form of its directional focus. It is the presence of these discontinuities in the concrete form of history that, for

postmodernism, not only undermines a teleological reading of the past through the metanarratives of modernist knowledge, but simultaneously qualifies the capacity of science to derive its meaning through the objective determination of an underlying logic.

This Enlightenment belief in the capacity of science to provide a secure foundation for knowledge is further qualified through the analytical methodologies used by science to penetrate the past as an object of knowledge. This is because although it is through the use of such methodologies that modernity is able to recover the past, its fundamental 'otherness' is simultaneously eroded as the temporal deepening of modernist 'techniques of classification and rationalisation ... homogenise and tame the past' (Thomas 1999: 1). As a result rather than capturing the underlying essence of 'a dead and alien culture in its own terms' (Thomas 1999: 1), the past is instead reproduced through the image of the present, and it is in this elimination of temporal distance consequent upon the analytical categories and procedures of modernist knowledge that the past is constituted as a familiar and accessible object. It is this that explains the positioning of the past within a metanarrative of progress for it is through the rendering of the past as an object that is similar in form to that of the present that modernity is not only able to construct a relation with it but, in so doing, establish its sense of distinctiveness in terms of the perceived movement of an underlying causality operating within it.

It is the knowledge effects generated through this 'forcing of the past into modernist categories and classifications' (Thomas 1999: 5) that explains the post-modern inflection of archaeology as a modernist discipline for in contrast to the 'presentist deformations' (Thomas 1999: 5) emanating from the Enlightenment framing of modernist knowledge, the underlying objective of archaeology is instead seen to reside in its 'attempt to recover the strangeness of the past' (Thomas 1999: 5). It is this movement to an 'archaeology of difference' centred upon the separation of the past from the present (Thomas 1999: 5-6) that informs the emergence of post-processualism as the dominant paradigmatic framework in contemporary archaeological theory and the

emphasis it accords to an interpretative reading of material culture for in contrast to the rationalising frameworks of the present, it is through the recovery of those frameworks of cultural meaning embedded within material culture that the conditions are established for understanding the experiential frameworks of its lived existence.

It is this movement to an interpretative reading of material culture that informs the current framing of the Neolithic as a 'symbolic revolution' for rather than representing the inception of a trans-historic dynamic of change centred upon the sphere of production, the appearance of its elements are instead seen as representing the emergence of a new framework of cultural understanding concerning 'the place of people in the scheme of things, about descent, origins and time, and about relations between people' (Whittle 1996: 355). As a result the Neolithic is understood as marking 'less of an economic revolution than a revolution of subjectivity' (Thomas 1993a: 92) which 'made new ways of being human possible' (Thomas 1999: 228) as 'the idea of a way of life which separates humanity from nature may have been more important than the material reality' (Thomas 1991: 181). In opposition to the metanarratives of modernist knowledge, it is the conceptual rather than the material appropriation of the natural world that is consequently conveyed through its material culture, such that rather than representing movement beyond the subsistence strategies of the Mesolithic, the Neolithic is instead seen as expressing the symbolic formation of a new kind of subjectivity appropriate to the subsequent emergence of agriculture.

## **Chapter 2. The Emergence of the Neolithic.**

### **2.1 Beyond the totalising frameworks of modernist knowledge.**

Informing this movement to an interpretative reading of the Neolithic is the presence of an evidential base that is itself suggestive of an absence of synchronicity concerning the emergence of its economic and cultural elements for, as Thomas notes:

“In the Atlantic zone, the onset of the Neolithic was remarkable for its swiftness ... There seems to have been very little delay between the first use of pottery and construction of monuments ... over a very wide area ... Yet while the cultural changes were clearly abrupt ... the transformation of subsistence activity was much more gradual ... The very sudden cultural change from Mesolithic to Neolithic appears to be superimposed upon a much more long-term shift from food-gathering to food-production.” (Thomas 1999: 16)

It is this lack of synchronicity that, for post-processualism, undermines the modernist conception of the Neolithic as an integrated totality structured around the determining framework of the economy. This is because in associating the Neolithic with the inception of agriculture, the Neolithic is necessarily read economically since it is at the level of the economy that the underlying essence of the Neolithic is seen to reside (Thomas 1993b: 368). As a result it is the economy that defines the overall character of the Neolithic and shapes the form of its material culture such that, not only does the appearance of new ceramic and lithic technologies express the transformative effects generated by the movement to a sedentarised agricultural practice on the external world, but, through altering the form of its relation with the social, establishes the conditions for a corresponding framework of cultural understanding centred upon the emergence of a mortuary architecture whose monumentalised expression not only reflects the ‘stable adjustments’ of a mature farming economy (Case 1969: 181) but simultaneously secures a reproductive framework for it through the

legitimacy it accords to a territorially segmented social structure (Renfrew 1976: 204-205).

For Thomas, underpinning this understanding is ‘the model of economic base and cultural superstructure’ (Thomas 1996a: 1) and the way this causes the economy to be identified as being ‘in some way ... fundamental ... forming the precondition for all aspects of human life’ (Thomas 1999: 7) such that ‘changes in cultural expression must reflect more profound changes in economic practice’ (Thomas 1996a: 1). Indeed, it is this centrality accorded to the economy as an underlying determining process that not only informs the pivotal positioning of the Neolithic within the broader metanarratives of Enlightenment historiography, but simultaneously frames the way the Neolithic is epistemologically constructed as an object of modernist knowledge. This is because, under modernity, knowledge is itself inflected with the wider Enlightenment claim to a holistic framework of understanding as the social is itself conceived as a complex totality whose overall coherence is rendered knowable through the conceptual determination of the whole (McLennan 1992: 329). As a result knowledge, in Enlightenment epistemology, is seen as proceeding through a process of abstraction and the way this not only appropriates the concrete, but reproduces its underlying complexity in thought since:

“The concrete is concrete because it is the concentration of many determinations, hence unity of the diverse. It appears in the process of thinking, therefore, as a process of concentration, as a result, not as a point of departure, even though it is the point of departure in reality and hence also the point of departure for observation (*Anschauung*) and conception ... the method of rising from the abstract to the concrete is only the way in which thought appropriates the concrete, reproduces it as the concrete in the mind.” (Marx 1973a: 101)

It is this understanding of knowledge and its form of production that underwrites the modernist construction of the Neolithic as a structured totality for in conceiving the movement to agriculture as a fundamental determining process in history, the Neolithic is necessarily read through a narrative of economic change. As a result it is at the level of the economy that the Neolithic is

rendered coherent as an object of knowledge since it is through the underlying causality of a sedentarised agricultural practice that the conditions are given for the emergence of its cultural elements. In conceiving the cultural as the material manifestation of a wider historical dynamic, the Neolithic is consequently reproduced in knowledge through the epistemological framework of the economy and the way this not only structures its overall complexity in thought but, in so doing, renders the totality of its elements knowable in terms of the relation that they occupy with the economy since 'only agriculture could provide the essential fuel for that degree of social elaboration' (Legge 1989: 236) exhibited through the forms of its material culture.

It is this totalised reading of the Neolithic that the evidential base for the Atlantic fringe of north-west Europe renders problematic for rather than expressing the features of a sedentarised agricultural practice, the inception of the Neolithic is here marked by the appearance of its cultural elements (Bradley 1998a: 10). It is this cultural movement that, for post-processualism, transcends the modernist framing of the Neolithic as an integrated totality for rather than having its conditions of existence inscribed within the determining framework of the economy, the cultural is instead conceived as an autonomous sphere of change whose elements establish the conditions for subsequent movement at the level of the economy. In inverting the relation of the cultural to the economic, post-processualism consequently moves beyond the modernist conception of the Neolithic as an economic entity underlain by a single historical process. Instead, the Neolithic is read culturally such that rather than expressing the transformative effects of a sedentarised agricultural practice, the underlying essence of the Neolithic is now seen to reside in the altered frameworks of understanding it brings to the external world and the relation it has with the social.

## 2.2 Monuments and the changing form of the Neolithic.

Informing this movement to a cultural reading of the Neolithic is the northward spread of agriculture along the loess corridors of central and western Europe following the initial appearance of the Neolithic in the Balkan Peninsula during



the second half of the sixth millennium BC (Hodder 1990: 48). Driving this advance was the emergence, in the Hungarian Basin, of the *Linearbandkeramic* [LBK] at 5600-5500 BC and its subsequent spread along the middle and upper stretches of the Danube to reach the Rhineland at 5300 BC and the Paris Basin at 5200-5100 BC (Midgley 2005: 21). The rapidity of this advance is itself indicative of a relatively uninhabited landscape, open to agricultural colonisation, resulting from the lower exploitable biomass of a closed and developed woodland environment in its climax phase of post-glacial growth (Whittle 1996: 149-150) and it is this generalised absence of a prior demographic presence that explains the underlying uniformity of its settlement practice throughout its overall area of distribution.

Characterising this spatial movement was a dispersed and clustered settlement practice marked by the repetitive occupation of fertile loessic soils positioned along the lower terraces of small river valleys (Midgley 2005: 22). Within this valley, water, loess niche a mixed subsistence strategy was practised centred upon the cultivation and rearing of domesticated cereals [primarily einkorn, emmer and barley] and livestock [with faunal assemblages pointing to the predominance of cattle over that of sheep, pig and goat]. Beyond this loessic, riverine zone pollen evidence indicates the limited impact made by this strategy on the surrounding woodland (Hodder 1990: 116) and the presence of shade-loving varieties amongst the weeds associated with cereal agriculture suggest that plots were themselves overshadowed by the forest edge (Hodder 1990: 117). Whilst this absence of clearance activity together with the evidence derived from plant remains points to the restricted size of the cultivable area (Hodder 1990: 117), its combination of loess and proximity to water did, however, establish conditions favourable to the maintenance of high yields under conditions of prolonged cultivation (Whittle 1996: 160) without the risk of soil exhaustion (Hodder 1990: 117) and suggests the presence of an intensive hoe agriculture conducted in small permanent or rotating fields (Hodder 1990: 117).

Underpinning this settlement preference for a wooded river valley environment was the domestic architecture of the longhouse. Initially rectangular in shape

but assuming a trapezoidal form amongst the late Danubian groupings of the Lengyel, Rössen and Villeneuve-Saint-Germain at the northern limits of LBK distribution (Midgley 2005: 23), these structures exhibit a uniform ground plan delineated by five rows of posts of which the outer rows comprised the walling, whilst the inner rows were roof-bearing (Whittle 1996: 163). Internally these structures could be divided into as many as three distinct segments, each characterised by a different arrangement of posts (Hodder 1990: 114). Within this spatial organisation the central segment was universal (Bradley 2001: 50) and was generally defined by a Y-shaped arrangement of posts with the entrance set at the narrow end (Whittle 1996: 163). Deposits of charcoal in the post holes of this segment are seen as indicating the presence of centrally placed hearths and points to its use as a habitation area (Whittle 1996: 163). This central area could be extended at its entrance with an additional segment whose double arrangement of posts (Hodder 1990: 103) is interpreted as evidence for a lofted granary space (Whittle 1996: 163), whilst the rear could be supplemented with a further segment whose continuous bedding trench (Hodder 1990: 103) precluded any subsequent enlargement of the structure (Bradley 2001: 52). This internal organisation of space was, itself, replicated externally along each side of the structure, through the presence of flanking pits divided by causeways (Bradley 2001: 52) from which the raw material was provided for the wattle-and-daub construction of the outer walling (Whittle 1996: 163).

Accompanying these flanking pits were a number of additional pits located around its immediate vicinity and, collectively, the deposits derived from them indicate the centrality of the longhouse as a focus of productive activity. Such activity not only ranged from the functional use of pottery to the working of flint and stone (Hodder 1990: 103-105) but resulting concentrations of sherds, together with the debris associated with tool manufacture, suggest that such activity was itself differentiated and conducted within prescribed zones adjacent to the longhouse (Hodder 1990: 106-107). This organisation of external space into recurring zones of productive activity accorded an underlying spatial configuration to the clustered settlement pattern of the LBK as the radial scope of these working areas not only grouped individual longhouses at similar

intervals to each other but, in so doing, caused them to exhibit a shared orientation (Whittle 1996: 165).

This spatial patterning was replicated temporally through the tendency for individual longhouses to be periodically abandoned and replaced, despite the substantive nature of the timbers used in their construction and the limited evidence shown by excavated remains for their repair (Bradley 1998a: 44). Whilst still structurally sound, however, the presence of burials near the walls as well as in the flanking pits of these structures (Midgley 2005: 65) suggest death as the cause for abandonment (Bradley 2001: 53) and the way this rendered such sites as unsuitable for the living (Midgley 2005: 129). As a result, rather than intersecting the ground plans of these sites (Whittle 1996: 166), replacement structures instead reproduced the shared alignment and spatial patterning of abandoned sites through their subsequent extension of the occupied area (Bradley 1998a: 44), such that, with the gradual shifting of the longhouse, the dispersed and clustered nature of the settlement pattern was itself spread horizontally across the wider landscape.

Within this spatial movement the shared alignment of these structures was culturally significant for whilst they exhibit a broad north-south orientation in central Europe, they are deflected towards the north-west at the limits of LBK expansion (Bradley 2001: 53). As a result these structures 'appear to reflect the ... direction of ... colonization' (Bradley 2001: 53) and given the uniform reproduction of its ground plan over a distance of at least 1,500 kilometres (Midgley 2001: 24), points to the symbolic importance of its architectural form as a source of cultural understanding. It is this presence of a wider framework of cultural meaning within the overall settlement pattern that is conveyed through the shared alignments of these structures as the northward advance of the LBK, through central and western Europe, not only caused their entrances to be positioned at the southern and south-eastern end but, in so doing, resulted in them facing 'the same ancestral homelands' (Bradley 2001: 55), such that, as well as representing the domestic architecture of a sedentarised agricultural practice, the longhouse simultaneously 'charted the history of the first farming

communities' (Bradley 2001: 55) through its cultural referencing of a common origin.

This referencing of a shared history and origin is also evident in the recurrent nature of its accompanying mortuary practices for whilst burials are present in the abandoned structures of the longhouse (Whittle 1996: 167), the dead were primarily located in cemeteries adjacent to the areas of settlement (Bradley 1998a: 45). These cemeteries replicate the shared alignments and spatial patterning of the settlement context in that graves do not overlap and exhibit a broad east-west orientation (Whittle 1996: 168). Within this spatial configuration the dominant burial rite was crouched inhumation, conducted in simple oval-shaped pits, with the corpse positioned on its left side with the head to the east (Midgley 2001: 65-66). As a result the dead faced south and, in so doing, articulate the shared beliefs of the living as the orientation of their graves reproduces the prevailing alignment of the longhouse (Whittle 1996: 169) and the symbolic association this establishes with a common ancestral past.

It is this cultural referencing of a shared ancestral past through the material uniformity of a sedentarised agricultural practice that breaks down with the subsequent movement of the Neolithic into the Atlantic fringe of north-west Europe for, as Pollard notes:

"It is now generally recognized that permanent settlements of the kind found in the Early Neolithic of central ... Europe are not a feature of much of the later fifth and fourth millennia bc of northwestern Europe ... For many regions occupation traces recurrently take the form of surface scatters of artefacts, occasional living surfaces, pits, and loose arrangements of post-holes and stake-holes. Such ephemeral traces may in part be explained by an inherent degree of residential mobility, whatever its precise form ..." (Pollard 2000: 363)

Rather than exhibiting an underlying continuity with the sedentarised practices of the LBK, the Neolithic was instead marked by the emergence of a mortuary architecture and it is this that differentiates the form of its appearance from that

of the central European sequence. For Hodder, this change in the form of the Neolithic reflects broader movement in the *domus* as a site for asserting the presence of the cultural within the wider setting of the *agrios* since it is through the transformative practices of the *domus* that the wild was progressively tamed and controlled through the domestication of its elements (Hodder 1990: 39). In central Europe this enculturing of the *agrios* expressed itself through the centering of the *domus* on the domestic structures of the longhouse and the way its practices of domestication not only separated agriculture from the wild, but simultaneously distanced its proximity to the *agrios* through the monumentality of its architectural form which, although exhibiting a width of 6 to 7 metres, could reach a length of 30 metres or more depending upon the number of constructional segments involved (Whittle 1996: 163). Similarly, the spatially reduced concentrations of debris associated with its productive activities (Hodder 1990: 103) together with the low proportion of wild animal remains recovered from the faunal assemblages of the LBK (Hodder 1990: 117) indicate this exclusion and control of the wild resulting from the cultural intervention of the longhouse as a monumentalised form of the *domus*.

As well as asserting the cultural, the *domus* also establishes the social since it is through its practices of domestication that the individual is inserted into the wider dependencies generated by the delayed returns of the agricultural cycle (Hodder 1990: 42). It is the enculturing of the individual appropriate to the realisation of these dependencies that is achieved through the architectural referencing of a common ancestral past and the way this subordinates the individual within the shared meanings of an underlying foundational narrative whose collective understanding constructs subjectivities essential to the economic relations of a sedentarised agricultural practice. In fixing the individual within the economic dependencies of the longhouse, the *domus* consequently structures the principles regulating social life and it is this that explains its uniform reproduction through the domestic architecture of the LBK, since it is through the opposition it establishes with the wild together with the understanding its socialised practices give, that the conditions for agriculture are made possible.

It is this capacity of the longhouse to articulate the *domus* through the practices of a sedentarised agriculture that changes under the altered demographic conditions of north-west Europe for rather than exhibiting an underlying continuity with the domestic structures of the LBK, the further spread of the Neolithic was instead marked by the appearance of a mortuary architecture. For Sherratt, this mutually exclusive occurrence in mortuary and domestic architecture characterising the archaeological record of Neolithic Europe 'corresponds to a fundamental difference in the structure of settlement' (Sherratt 1990: 149) for against the sedentarised movement of the LBK through the loess corridors of central Europe, the ephemeral occupation traces of north-west Europe were, instead, indicative of a mobile settlement pattern whose dispersed and insubstantial structures necessarily undermined the continued ability of the longhouse to function as a symbol of permanence and community (Sherratt 1990: 149). Instead such symbolism was provided through the durable presence of the tomb as a 'surrogate foci' (Sherratt 1995: 258) for the domestic structures of the LBK and it is this that explains the changing form of the *domus* appropriate to the altered settlement context of north-west Europe, since it was through the practices of a mortuary architecture that 'a community which no longer had a permanent physical existence on the ground' (Sherratt 1995: 250) could be created.

It is this change in the form of the *domus* that explains the current emphasis accorded to a cultural reading of the Neolithic for rather than expressing the transformative effects of a sedentarised agricultural practice, the mortuary monuments of north-west Europe are instead regarded as establishing 'the conditions for economic change' (Bradley 1993: 1) through the way they invoke 'a new sense of time and place' (Bradley 1993: 20) that 'made agriculture both thinkable and possible' (Bradley 1993: 18). It is this 'different attitude of mind' (Bradley 1993: 21) that is conveyed through the practices of the tomb as 'a transformed *domus*' (Sherratt 1995: 258) for in the absence of a durable domestic architecture it was through the culturing of death that the wild was not only controlled and tamed, but the individual subsumed within the social dependencies of a wider ancestral presence. It is this altered understanding of the natural and the relation it has with the social that is referenced through the

landscape positioning of the tomb and the way its architectural 'presencing' of an ancestral past (Thomas 1993a: 83) transforms a 'nomadic understanding of place through a physical intervention, introducing new meanings to the land' (Thomas 1998: 49). As a result the mortuary monuments of north-west Europe are seen as representing fixed nodes within an impermanent landscape whose presence constitutes the Neolithic through the experiential framework of a reconstructed topography and the way this constructs subjectivities appropriate to subsequent movement at the level of the economy.

### 2.3 The Mesolithic of north-west Europe.

Informing this understanding of the Neolithic and its changing form was an established Mesolithic presence along the Atlantic façade of north-west Europe for in contrast to the ecological conditions of the interior, the optimal thermal conditions of the Atlantic period favoured the focussing of settlement upon the littoral zone (Midgley 2005: 14-15). Here the diversity of habitats formed through the meeting of the aquatic and maritime environments of the seaboard, with the temperate forests of the interior, offered a broad-based subsistence strategy centred upon the marine and terrestrial resources of the interface (Cunliffe 2001: 115-118) whose exploitation was rendered more effective through the movement, during the seventh millennium BC, to a narrow blade technology that was itself geared to the production of a greater variety of projectile points, of which the trapeze was the dominant form (Midgley 2005: 18). The demographic stability afforded by this strategy together with its capacity to spread the threat of risk through the juxtaposed environments of the interface consequently accorded the Mesolithic with an increasingly sedentary character (Cunliffe 2001: 134), whose tendencies to permanence are reflected in the accumulated shell-middens of the Atlantic and Scandinavian coasts.

Thus, at the type site of Ertebølle, on Limfjord, in northern Jutland, a mound of accumulated shells, representing an occupation horizon of 700 to 800 years, covers an area of 140 metres by 20 metres and is 2 metres deep (Cunliffe 2001: 121), whilst that at the neighbouring site of Bjørnsholm-Åle is up to 500 meters long and between 30 to 50 metres in width (Whittle 1996: 182).

Similarly, in the Bay of Quiberon, the shell midden at Tévéc is 1 metre deep and covers an area of 200 square metres, whilst that at Hoëdic, although of similar scope, is only 30 to 40 centimetres deep. Further middens are located at La Pointe de la Torche, in the bay of Audierne, which, although smaller in extent to that of Tévéc and Hoëdic, exhibits a depth of 1 metre, as well as at Beg-er-Vil, on the Quiberon peninsula, and St. Gildas, close to the mouth of the Loire (Cunliffe 2001: 129-130). Interspersed through the layers of these middens were stone-built, circular hearths (Midgley 2005: 15), together with the bone and plant remains of a marine and terrestrial resource base (Midgley 2005: 16-17) whose seasonal composition was itself indicative of a year-round occupation (Whittle 1996: 183).

Accompanying this demographic stability was the emergence of an increasing complexity in the social form of the Mesolithic as it was through the resource security of the interface that the conditions were established for the appearance of the first cemeteries in Europe (Cunliffe 2001: 138). These cemeteries were located within the areas of settlement (Midgley 2005: 70) and exhibit primary inhumation as the dominant rite (Midgley 2005: 57). Inhumation could be single or multiple in form with corpses generally laid out in an extended position on the back (Midgley 2005: 57) in pits that were dug directly into the ground (Midgley 2005: 58) and which, despite being in close proximity to each other, did not overlap (Midgley 2005: 70). Thus, at the Ertebølle site of Skateholm, two cemeteries were located adjacent to the settlement area. The earlier, Skateholm II, covered an area of 40 metres by 20 metres and comprised predominantly single burials in over twenty graves, although two adults were interred in grave X and two minors in grave XII (Whittle 1996: 154). At the later cemetery of Skateholm I, sixty-two individuals were represented by fifty-seven graves (Whittle 1996: 197) with one grave containing the double inhumation of an elderly male and a young female (Cunliffe 2001: 136). Similarly, at the Vedbæk Fjord on the north-east coast of Zealand, over twenty individuals were interred in just under twenty graves in the area of Bøgebakken and whilst the majority of inhumations were single, a triple grave contained an infant positioned between an adult male and an adult female (Whittle 1996: 197). Further south at Strøby Egede, on the east side of Zealand, eight individuals



were interred in a single grave (Midgley 2005: 57), whilst at the submerged site of Tybrind Vig, off the west coast of Fyn, an adolescent female had been buried with a newborn infant (Cunliffe 2001: 136).

In contrast to the Ertebølle sites of the Baltic, the inhumation practices of the Morbihan were conducted in small, stone-lined cists which had themselves been constructed within the Téviecian shell-middens of the Armorican coast (Midgley 2005: 58). At Hoëdic, fourteen individuals occupied nine graves (Cunliffe 2001: 136), with graves C and F containing multiple interments (Midgley 2005: 105), whilst, at Téviec, twenty-three individuals were distributed over ten graves. Seven of these graves contained more than one individual, with that of grave K containing six (Cunliffe 2001: 136). At both sites the sealing of those cists containing multiple interments with removable capstones (Midgley 2005: 58) suggests the functioning of these graves as collective tombs whose sustained use over a prolonged period of time is demonstrated through the resulting disturbance caused to earlier burials by each subsequent interment (Cunliffe 2001: 136).

Underpinning this difference in inhumation practice was the presence of a shared symbolism between the Baltic and Armorican sites for, in each case, the corpse was accompanied by a set of organic grave goods in the form of bone tools, together with beads and pendants made from the teeth of animals and perforated shell (Midgley 2005: 62-63). Similarly, in both zones, corpses were treated with red ochre and placed in the grave within an antler framework (Bradley 1998a: 25). The domesticated dog was also present and, at Skateholm, received the same inhumation rites as that accorded to the population. Here, at the earlier cemetery of Skateholm II, not only had a dog been interred with an adult female in grave VIII, but separate dog burials had been conducted in three other graves (Whittle 1996: 154), whilst, at the later cemetery of Skateholm I, dogs had been interred in eight separated graves (Whittle 1996: 197) and provided with red ochre (Bradley 1998a: 26).

For Bradley, the origins of this symbolism can be traced back to the presence of its elements in the mortuary practices of the Upper Palaeolithic (Bradley 1998a: 31), and their persistence down to the Late Mesolithic cemeteries of the sixth

and fifth millennia BC points to their continued significance as a framework of cosmological meaning concerning the nature of the natural world and the relation it has with the social. Informing this relation was an undifferentiated conception of the social and natural worlds and it is this that is conveyed through the ritual treatment accorded to the dog (Whittle 1996: 155), as well as in the way the unmodified character of its organic grave assemblages reference, rather than transform, those aspects of the natural world that were central to the practices of the subsistence economy (Bradley 1998a: 24-25). Similarly, the deposition of the dead with antler and red ochre can be seen as symbolising the fertility and regeneration of the natural world through the metaphor of the stag (Bradley 1998a: 25) together with the association accorded to red ochre with the life-giving properties of blood (Bradley 1998a: 24). Underpinning this emphasis on fertility and regeneration was an understanding of the natural world as a 'creative principle' (Bradley 1998a: 32) which made the social possible, such that, rather than being separate from nature, the social was instead perceived as an integral part of it, and it is this positioning of the social within the natural that the mortuary practices of the Late Mesolithic express and the way this causes its symbolism to render 'any ... division between culture and nature ... meaningless' (Bradley 1998a: 33).

In opposing that subordination of the natural to the social entailed by domestication, this symbolic understanding not only marked the presence of a cultural boundary between the LBK and the Mesolithic populations of north-west Europe, but explains the subsequent arrest of the Neolithic at the northern limits of the loess during the fifth millennium BC (Bradley 1998a: 11) as the demographic stability afforded by the interface informed the emergence of a stable frontier between two contrasting conceptions of the world and its corresponding forms of engagement. However, whilst delineating the presence of two opposed social systems, this boundary was not characterised by an isolated coexistence. Instead the evidential base is indicative of an interaction between them and is demonstrated both in terms of the recurrent distribution of perforated LBK axes and shafthole adzes across southern Scandinavia and the North European Plain (Midgley 2005: 30; Thomas 1996b: 314) as well as in the emergence of an LBK derived ceramic technology amongst the Ertebølle sites

of the Baltic from 4700 BC (Cunliffe 2001: 152) and the neighbouring Swifterbant sites of the Dutch coastal wetlands from 4900 BC (Midgley 2005: 28). Although coarse tempered and restricted to an undecorated point-butt, S-profiled form (Whittle 1996: 199), impressions of cereal grains have been recovered from those vessels derived from Ertebølle contexts (Thomas 1996b: 314), and this presence of domesticates is replicated through the levee sites of the Swifterbant, which show evidence of barley (Thomas 1996b: 316). Indeed, for Midgley, the Swifterbant 'appear to have been more receptive to the novel resources, incorporating cereal growing and animal husbandry into their economy long before their Scandinavian counterparts' (Midgley 2005: 28).

It is through this interaction that the conditions were established for the subsequent movement of the Neolithic into north-west Europe at the close of the fifth millennium BC as the progressive assimilation of its elements is seen as undermining existing frameworks of cosmological meaning centred upon a unified conception of the social and natural worlds (Bradley 1998a: 34). It is this conceptual movement that differentiates the Neolithic of central Europe from that of the Atlantic façade for rather than expressing the colonising effects of a uniform material culture, the inception of the Neolithic is here regarded as reflecting the active modification and transformation of its elements by the Mesolithic groupings of the interface as:

"Around the Atlantic fringe of north-west Europe ... indigenous foraging communities combined aspects of traditional and exotic cultural repertoires ... to establish a new framework for social life ... In ... southern Scandinavia, the low countries and northern France ... a fundamental difference existed between ... having access to domesticated resources ... pottery ... stone axes, and using these ... as a means of expressing and reproducing relationships between people, animals and landscape. This difference characterises the start of the Atlantic Neolithic, a Neolithic which was distinct in kind from that of central ... Europe. It was not based upon a uniform package of traits, since individual communities drew upon and elaborated the emerging cultural repertoire in ... different ways, and it was not connected with a

uniform social change to facilitate agriculture ... But it was integrated and it did bring about social transformations because it involved an altered relationship between people and material things.” (Thomas 1999: 15-16)

It is this reformulation of the Neolithic that is manifested through the mortuary landscapes of the Cerny and *Trichterbecherkultur* [TRB] as ‘the first native Neolithics of Northwest Europe’ (Thomas 1996b: 319). Emerging respectively around 4500 BC in the Paris Basin and in the area stretching from Lower Saxony in the west to central-north Poland in the east, and subsequently spreading into northern France, the Low Countries and southern Scandinavia during the latter part of the fifth millennium BC (Midgley 2005: 35-37), these formations were characterised by the appearance of a long mound tradition whose form is seen as referencing the domestic architecture of the LBK. Indeed, for Childe:

“The Danubian peasants lived in very long houses, some rectangular others trapezoid in plan. Some at Brzesc Kujawski ... were as much as 32 m. long, 10 m. wide at the south end but only 5 m. at the inner extremity. Now some First Northern farmers ... laid out the long barrows over their graves on a very similar plan ... It is tempting to see in this ... plan an attempt to make the house of the dead approximate to habitations such as are illustrated at Brzesc Kujawski. Sprockhoff ... indeed has pointed out that in its original form a North German long barrow (*Langdolmen*) would look very like a house with the wall timbers represented by stones and the thatched-gabled roof by turf.” (Childe 1949: 135)

For Bradley this referencing of a domestic by a mortuary architecture has its origins in the settlement characteristics of the LBK as the tendency to periodically replace existing structures meant that at any point in time the settlement pattern would have comprised a combination of new and abandoned structures. As abandoned structures progressively decayed and collapsed they would have become marked by a long, low mound whose presence would ‘create an association between the form of the longhouse and ... the dead’

(Bradley 1998a: 46). It is this association that is conveyed through the monumental cemeteries of the Cerny and TRB. Positioned within, or in close proximity to, the settlement zones of the LBK, these cemeteries not only replicate 'the spatial arrangements of ... late Danubian settlements' (Midgley 2005: 86) but mark the emergence of a new cultural tradition whose presence 'imitated the longhouse idea and inscribed it in new form' (Whittle 1996: 195).

It is this 'transmission ... of an idea ... from settlement to burial' (Hodder 1992: 62) that is demonstrated by the Eastern TRB as 'the only part of the TRB that overlaps chronologically with the late LBK' (Darvill 2004: 76). Here, in the Polish region of Kujavia, the TRB cemetery at Sarnowo was located within a distance of 15 kilometres from the contemporary Lengyel settlement at Brześć Kujawski and reproduces its spatial layout in that the clustered organisation of its long mounds into groups of three echoes the arrangement of domestic structures in the settlement pattern (Midgley 2005: 126-127). This correspondence with the clustered settlement organisation of the Lengyel was not confined to Sarnowo but was also replicated at other Kujavian cemeteries such as Leśniczówka, Obalki, Wietrzychowice and Zberzyn (Midgley 2005: 127) and, for Midgley:

"... offers the strongest arguments yet for ... the derivation of the earthen long barrow from the long house. Not only are the Kujavian long barrow cemeteries built contemporaneously with, and in close proximity to, long-house villages, but the structures also resemble one another in dimensions, ground-plan and spatial arrangement ..." (Midgley 1985: 215)

Whilst not overlapping with the Villeneuve-Saint-Germain (Midgley 2005: 119), the cemeteries of the Cerny exhibit similar characteristics. Located in the valleys of the Yonne and the Seine, these cemeteries are situated in those areas previously occupied by the LBK, whose settlement remains would have still been visible in the landscape. It is these remains that determine the nature of the cemeteries. Thus, not only do the long barrows of the south Paris Basin replicate the domestic structures of the LBK in terms of shape and delineation by ditch segments but, at the cemetery of Escolives-Saint-Camille, they offer 'a

perfect dimensional and conceptual match' (Midgley 2005: 87). Similarly, at Passy, a cemetery, of at least thirty elongated long mounds clustered in groups of two or three, was constructed near the site of a late Danubian settlement (Midgley 2005: 87-88), whilst, at Balloy, a cemetery of seventeen barrows overlaid a Villeneuve-Saint-Germain settlement with at least five of the barrows being directly superimposed over the ground plans of its earlier domestic structures (Midgley 2005: 88). Indeed, for Bradley:

“... at Balloy ... the positions of individual houses were overlain by earthworks that shared the sizes and orientations of those buildings ... Even though some time may have elapsed between these different kinds of structure, it is obvious that the people responsible for the long barrows had a precise understanding of the layout of the older settlement.” (Bradley 2001: 50)

Underpinning the emergence of these cemeteries was the structuring of the Neolithic on the notion of ancestry as an underlying ordering principle regulating the conditions of social life. It is this ordering principle that explains both the locational context and architectural form of these sites since it is through the referencing of the settlements of the LBK that a new 'sense of time, beginnings and descent' (Whittle 1996: 365) was created appropriate to an altered understanding of the world and its form of engagement. In symbolising the 'arrival of the first farmers onto new lands' (Midgley 2005: 132), the largely abandoned settlement remains of the LBK consequently established the conditions for a foundational narrative centred upon an ancestral presence whose permanence within the landscape was translated through the cemeteries of the Cerny and the TRB and the way these fused the present with the past by means of a mortuary architecture whose form and spatial layout recalled the 'existence of entire settlements' (Bradley 1998a: 48).

Beyond the south Paris Basin and the southern limits of the North European Plain, the settlements of the LBK could no longer function as a symbol of permanence and it is this that explains the spatially diffused distribution of a long mound tradition throughout the Atlantic fringe of north-west Europe

(Hodder 1990: 152). Here, rather than replicating the 'entire ancestral village' (Midgley 2005: 131), the mortuary landscapes of the Cerny and the TRB were instead characterised by the architectural referencing of its individual components and it is this that is conveyed through the shared attributes exhibited by each form in terms of construction, shape, alignment and orientation (Hodder 1992: 53-55; 1990: 149-150). As a result the mortuary architecture of the Cerny and the TRB is here seen as representing the symbolic translation of a house of the living into a house of the dead and it is through this translation that the conditions were established for extending the ordering principle of ancestry as 'one of the central features of the Neolithic' (Whittle 1996: 365). Whilst the form of this extension was differentially expressed through the variant morphologies comprising this tradition and, in north-western France, gave rise to a passage grave tradition whose circular architecture is thought to reference the domestic structures of the Tévécian Mesolithic (Hodder 1994: 76), these traditions not only 'put into visible and durable form the idea of a common ... past' (Whittle 1996: 365) but, in so doing, functioned as an 'instrument of ... conversion' (Sherratt 1995: 257) through which the further advance of the Neolithic beyond the ancestral settlement zones of the LBK was rendered possible.

#### 2.4 The Mesolithic of Britain and Ireland.

It is this understanding of the Neolithic and its movement through north-west Europe that frames its current reading in Britain and Ireland as a culturally induced process of change. Centred upon the interpretative context of the Ertebølle, the emergence of the Neolithic is here seen by Thomas as being analogous to that exhibited by the southern Scandinavian sequence, in that 'the inception of the Neolithic' (Thomas 1988: 62) is preceded by a 'history of contact' (Thomas 1988: 60) through which the existing Mesolithic population is progressively acculturated into a 'Neolithic way of life' (Thomas 2008: 61), whose full adoption was finally realised, in Denmark, by the appearance of the Northern TRB at 4000-3900 BC (Midgley 2005: 36).

It is the effectiveness of this analogy that is, however, challenged by the evidential base of the British and Irish Mesolithic, for not only is there 'little sign of ... Neolithic material items ... on Late Mesolithic sites' (Bradley 2003: 220) but there is 'no evidence for contacts between Britain and Northern Europe during the later Mesolithic period' (Bradley 2007: 35) as the post-glacial flooding of the land bridge severed Britain from the European mainland at around 6500 BC (Cunliffe 2001: 111). Prior to this the lithic technologies of Britain had resembled those of the Continent in that the obliquely blunted points of its broad blade assemblages mirrored the 'range of microlith shapes' (Jacobi 1976: 69) found 'over most of Northern Europe' (Jacobi 1976: 67). However, with the progressive narrowing of the land bridge from 7500 BC onwards (Bradley 2007: 10), the British trajectory began to diverge from that of the Continent in that the micro-triangles and narrow rod microliths defining its later Mesolithic assemblages (Jacobi 1976: 73-75) were only present in the Netherlands as that 'area ... with which ... the final land connection between Britain and the Continent was maintained into ... the first and second quarters of the seventh millennium' (Jacobi 1976: 72-73). This contrasts with the laterally truncated, broad-blade trapezoids and rhomboids characterising the late Mesolithic Continental assemblages of the early sixth millennium BC (Jacobi 1976: 75-76) which, whilst 'stretching for some 1000 miles North to South over mainland Western Europe' (Jacobi 1976: 78) are 'completely absent from Britain' (Jacobi 1976: 78). This lack of any 'artifactual evidence for social connections' (Jacobi 1976: 78) between Britain and Europe following the final breaching of the land bridge is further supported through the subsequent appearance, during the second half of the seventh millennium BC, of a pressure-flaked point technology in the form of *feuilles de gui* which, whilst present 'in that area of the Continent ... closest to S. E. England' (Jacobi 1976: 80), remains unrecorded in the British sequence.

This cultural isolation was also a feature of the Irish Mesolithic, for whilst its material culture was broadly comparable to that exhibited by the British sequence following its initial colonisation around 8000 BC, its subsequent trajectory assumed, from 6000 BC onwards, an increasingly insular form, as evidenced in the distinctive character of its lithic industries, subsistence



strategies and patterns of settlement (Bradley 2007: 8-10; Woodman 1978: 211). Thus, rather than being directed to the production of microliths, the lithic industries of the late Mesolithic sequence were instead characterised by the appearance of a hard hammer technology centred upon a multi-purpose broad blade industry whose narrowly constricted butt-trimmed forms culminate in the less heavily trimmed and retouched butts of the leaf-shaped Bann Flake (Woodman 1978: 209).

Outside the Isle of Man, these industries were unique to the Irish sequence (Woodman 1978: 211) and have their conditions of existence inscribed within the restricted range of post-glacial mammalian fauna consequent upon the eustatic separation of Ireland at 12,000 BC (Bradley 2007: 8). As a result, with the exception of wild pig, those ungulates that were already present in Britain [auroch, elk, red and roe deer] were prevented by the post-glacial rise in sea-level from colonising Ireland (Woodman 2000: 244-245; 1978: 136-137) and it is this that explains the absence of a microlithic technology in the late Irish sequence (Thomas 2008: 64), for rather than exhibiting a combined maritime and terrestrial resource base, as demonstrated through the distribution of coastal and upland settlement locations in south-western and northern England (Cunliffe 2001: 127-129; Woodman 2000: 247; 1978: 168), the subsistence strategies of the Irish Mesolithic were necessarily confined to the utilisation of its maritime, lacustrine and riverine environments given the lack of any 'alternative ... indicators which would suggest a heavy reliance on ... mammal hunting' (Woodman 2000: 237). It is in these environments that the assemblages of the late Mesolithic are located (Woodman 2000: 243) and their distribution is indicative of a lowland settlement pattern (Woodman 1978: 150) whose broad blade industries were directed to an economy that was essentially structured around 'fishing, sea mammal hunting, and shellfish collecting' (Woodman 2000: 245), supplemented by pig as 'the only large mammal to occur consistently on Irish Mesolithic sites' (Woodman 2000: 245).

Accompanying the insular character of these trajectories was the absence of any complexity in their social form (Bradley 2007: 35) for, in contrast to the Scandinavian sequence, there are 'no formal cemeteries from this period in

Britain and Ireland' (Cummings 2009: 17). Instead the late Mesolithic evidential base is here notable for its 'paucity of human burials' (Chatterton 2006: 107) and where they do exist none 'can be described as intentional burials of the whole ... body' (Chatterton 2006: 113). Rather, remains are isolated and fragmented in form, as evidenced in the partial femur recovered from the Irish shell-midden site at Rockmarshall, County Lough. Similarly, at the coastal site of Ferriter's Cove, on the Dingle peninsula in south-west Ireland, fragments of long bone and teeth were located within a midden-type deposit, whilst, on the Hebridean island of Oronsay, remnants of cranial vault together with clavicles, feet and hand bones were recovered from the shell-midden sites of Cnoc Coig, Caisteal Nan Gillean II and Priory Midden (Chatterton 2006: 112-115).

This pattern contrasts with the 'one convincing cemetery' (Bradley 2007: 32) located at the early Mesolithic site of Aveline's Hole in the Mendips. Here, on a possibly paved surface, the collective remains of at least seventy individuals were laid out on the floor of a cave, whose use as a cemetery was, itself, restricted to a narrow temporal span, given the radiocarbon dating of its skeletal material to between 8400 and 8200 BC. The brevity of this date span together with the identification of adults, adolescents, juveniles and infants from its remains suggests that the site could have represented the mortuary practices of a single group exercised over several generations (Conneller 2006: 148-151). This contrast with the late Mesolithic is also apparent at the early occupation site of Star Carr, in the Vale of Pickering, as the 'only place with much evidence of ritual activity' (Bradley 2007: 32). Here, a dated occupation horizon spans the period from 9300-8830 BC (Chatterton 2006: 103) and amongst the deposits recovered from its lake edge were twenty one antler frontlets displaying signs of modification appropriate to their subsequent use as headdresses (Chatterton 2006: 106). Similarly, the only evidence relating to the presence of monumental features in the landscape is to be found in the three early Mesolithic postholes located some two hundred metres from the Neolithic site of Stonehenge. Dated to the eighth millennium BC and displaying a broad east to west alignment within a cleared area of open hazel and pine woodland, these pits would have supported 'whole trunks of pine, each between 0.6 and 0.8m in diameter standing 3-4m out of the ground' (Darvill 2006: 62-63)

and their presence is widely interpreted as being analogous to that of totemic markers, whose locations formally delineate sites of ritual activity (Darvill 2006: 62-63; 1997: 174-176; Allen 1997: 125-126).

This absence of any tradition of monumentality in the British and Irish sequence is further supported through the accompanying refutation of the late Mesolithic reading of the passage grave cemetery at Carrowmore, in County Sligo (Woodman 2000: 232-235; Caulfield 1983: 206-210). Based on the controversial dating of Tomb 4, a contexted sample associated with its primary phase of construction gave a date range of 4790-4360 BC and, for Burenhult, meant that the cemetery must have been established during the early fifth millennium BC by an indigenous Mesolithic presence (Burenhult 2003: 67-68; 2001: 11, 19). This dating, however, was at variance with those obtained from the more reliably contexted Tombs 7 and 27 which, in yielding respective ranges of 4350-3800 BC and 3950-3690 BC, suggest 'construction c. 4000 BC' (Sheridan 2003b: 12). Similarly, in a further programme of dating, whilst Tomb 4 gave an even earlier range of 5620-5320 BC, those obtained from Tombs 1, 7, 19, 51, 55 and 56 were not only 'in line with the dates originally obtained for Tombs 7 and 27' (Sheridan 2003a: 11), but produced 'a more coherent pattern, suggesting initial activity around 4200-3800 BC' (Sheridan 2003a: 11). In contrast to the interpretation advanced by Burenhult that the 'earliest tombs at Carrowmore were constructed by Mesolithic ... groups' (Sheridan 2003c: 69), these ranges, coupled to the sparsity of 'evidence for Mesolithic funerary practices ... on both sides of the Irish Sea' (Sheridan 2003a: 14), consequently suggest that there 'is nothing to indicate that the earliest megaliths in Ireland relate to Mesolithic funerary traditions at all' (Sheridan 2003c: 69). Indeed, where such traditions do occur they 'indicate non-monumental treatment of the dead, in clear contrast to the practice of erecting megalithic tombs' (Sheridan 2003a: 14).

This has implications regarding the ability of the Scandinavian sequence to adequately function as an interpretative analogy for understanding the 'Neolithisation of Britain and Ireland as a lengthy process of indigenous transformation, involving the selective adoption of resources and practices from

the Continent' (Sheridan 2003a: 14) for, in contrast to that movement exhibited by the Ertebølle, the 'only signs of social complexity in the insular Mesolithic come from the first part of that period' (Bradley 2007: 86). As a result, rather than elaborating tendencies already present within the Mesolithic, the 'relatively sudden ... and widespread appearance of the Neolithic ... around 4000 BC' (Sheridan 2003b: 4) together with the 'total disappearance of Mesolithic assemblages' (Thomas 2008: 65) consequently suggests that in the absence of any 'prior contact ... *some* element of population movement *must* have been involved' (Sheridan 2003b: 4).

That the 'initial impulse must have begun on the Continent' (Bradley 2007: 35) is attested through the morphology of its domesticates for whilst the size indices of domesticated bovines recovered from the faunal assemblages of the early Neolithic in southern England differ from those pertaining to the Mesolithic aurochs at Star Carr (Tresset 2003: 20; Tresset 2000: 21), they exhibit a 'close proximity with animals from the Paris Basin' (Tresset 2003: 20). This suggests that, from the inception of the Neolithic, not only were such domesticates distinct from that of the native auroch but, in indicating the 'continental origin of the first British herds' (Tresset 2000: 27), their presence necessarily raises 'an important colonist component to the Neolithisation ... of southern Britain' (Tresset 2000: 21). Indeed, that such 'domesticates ... might have been introduced to southern Britain from the Paris Basin' (Tresset 2000: 27) is further supported in terms of the correspondence exhibited in faunal spectra between the two regions for, in each case, assemblages are dominated by cattle (Tresset 2003: 21) and it is this underlying similarity in faunal composition that points to the introduction of an exogenous cultural tradition centred upon the knowledge and techniques associated with a particular form of livestock practice (Tresset 2003: 24).

Similarly, whilst the absence of auroch in the Irish context necessarily points to the introduction of its domesticated variant (Tresset 2003: 24; 2000: 26), the faunal assemblages of the early Neolithic here reflect the mixed spectra of small stock and livestock exhibited at Maiden Castle (Tresset 2003: 27). This faunal composition also characterises the Neolithic assemblages of north-western

France where, at the settlement site of Er Yoh in the Morbihan, the faunal assemblage was 'found to comprise a significant proportion of sheep alongside cattle, as at Maiden Castle' (Tresset 2003: 23). Dated to the second half of the fourth millennium BC, this site not only post-dates Maiden Castle by several centuries (Tresset 2003: 23) but the presence of its faunal spectra along the Atlantic façade of western Britain and Ireland (Tresset 2003: 27) suggests the northward movement of an alternative cultural tradition centred upon the livestock practices of 'a western, Atlantic, faunal pattern' (Tresset 2003: 23).

In indicating 'multiple movements from various points of origin' (Sheridan 2003b: 5), these contrasting traditions in livestock practice consequently delineate the Channel and the western seaway as routes of Neolithic advance into Britain and Ireland (Sheridan 2004: 9-10; Bradley 2003: 219; Cunliffe 2001: 154). It is these routes that are conveyed through the spatially variant forms of a mortuary architecture for whilst the Channel necessarily linked southern and eastern Britain to a long mound tradition that was itself distributed along the continental edge of northern Europe, the Atlantic façade of western Britain and Ireland was instead characterised by the emergence of a passage grave tradition whose features have 'structural echoes in northwest France' (Bradley 2007: 100). Here, the presence of small, closed, megalithic chambers and their subsequent conversion into simple passage graves not only parallels the sequence exhibited in southern Brittany at the end of the fifth millennium BC (Sheridan 2003a: 12; 2003b: 10) but, at the coastal site of Achnacreebeag in west Scotland, pottery recovered from the secondary phase of the structure was 'identified as being of late Castelic style, as used in simple passage tombs in the Morbihan between c 4300 and 3900 BC' (Sheridan 2004: 10) and points to a 'Breton ... involvement in the appearance of the passage tomb tradition in Ireland and along Britain's Atlantic façade' (Sheridan 2003b: 4).

Indeed, such involvement is indicated at Ferriter's Cove, where 'domesticated animals have been identified in a secure Mesolithic context dating from about 4300 BC' (Bradley 2007: 32). These remains predate the first direct evidence relating to a Neolithic presence in Britain and Ireland by several centuries and are seen by Thomas as supporting the interpretative adequacy of the

Scandinavian analogy, in that they not only demonstrate 'that Ireland was not cut off from contact in the later Mesolithic' (Thomas 2008: 64), but suggest that 'if Mesolithic people in Ireland had access to domesticated cattle, the probability is that communities in both Ireland and Britain had a general familiarity with the Continental Neolithic' (Thomas 2008: 64). However, given the insularity exhibited through the evidential base of the late Mesolithic, it 'would appear wholly far-fetched to posit that local Mesolithic groups sailed to the Continent and brought back domesticated animals' (Tresset 2003: 25). Rather, in view of the 'general resemblance between the first megalithic monuments in Ireland and along the Atlantic façade of Britain and those in northern and western France' (Bradley 2007: 30), together with the long tradition of seafaring expertise held within the Morbihan (Sheridan 2004: 10; 2003a: 12; 2003b: 14), a more appropriate explanation for the presence of pre-4000 BC domesticates in Ireland would be to see their introduction in terms of the effects emanating from a failed attempt at colonisation (Tresset 2003: 25-26).

This weakening of the Scandinavian analogy is further demonstrated through the accompanying emergence of a long mound tradition in southern and eastern Britain for in referencing the domestic architecture of a distant past, they evoke an origin myth that makes it 'difficult to argue for complete continuity with the Mesolithic period' (Bradley 2007: 87). This is because, in replicating 'the forms of houses that once existed in other areas' (Bradley 2003: 221), the long mounds of Continental Europe necessarily 'referred to the origins of people in other places and times' (Bradley 2003: 221) and it is in this referencing of the settlements of the past that an understanding of these 'structures as components of a Neolithic ideology' (Bradley 2003: 221) that was subsequently adopted by the Mesolithic populations of Britain, is rendered problematic for:

"If these monuments played a role in the origin myths of communities on the Continent, it is hard to see why it should have been attractive to insular hunter-gatherers. Why should they have decided to trace their own descent to a distant source in the Rhineland? That would not be impossible, but is it really the simplest explanation? Surely it is more

likely that parts of the Neolithic population of Britain ... had ancestors in other areas of Europe.” (Bradley 2003: 221)

In pointing to the ‘movements of incoming ... communities from the continent’ (Sheridan 2004: 9), this spatial patterning in both mortuary architecture and faunal composition consequently suggests that its ‘earliest communities ... shared the same, continental ancestry and so brought the same basic traditions to Britain and Ireland’ (Sheridan 2004: 9). It is the underlying similarities exhibited through these shared traditions of practice and the connections they establish with the European mainland that qualify a reading of the Neolithic through the interpretative framework of the Scandinavian sequence for ‘*against* ... Thomas’ model of a gradual transformation, with indigenous forager communities being the main agent of change’ (Sheridan 2004: 9), the evidential base instead suggests that ‘the Neolithic ... was introduced by settlement from overseas’ (Bradley 2007: 30). This necessarily undermines the perceived absence in synchronicity underwriting the current framing of the Neolithic as a culturally induced process of change, for rather than expressing new ‘practices of inhabitation’ (Thomas 2008: 81) within an underlying framework of economic continuity, the evidential base instead suggests that its inception was both economic and cultural in form, and it is through this underlying correspondence in the form of its movement that the conditions are established for a reframed understanding of the Neolithic centred upon an integrated reading of its economic and cultural elements.

### **Chapter 3. Towards an integrated reading of the Neolithic.**

#### **3.1 Mesolithic continuity and the Neolithic.**

It is this understanding of the Neolithic as an interrelated movement of economic and cultural elements that is, however, displaced through the current emphasis accorded to a cultural reading of the Neolithic for rather than expressing the transformative effects of a wider demographic movement, the inception of the Neolithic is instead seen as having its conditions of existence inscribed within the capacity of the Mesolithic to 'create something new' (Thomas 1996b: 313) through the assimilation of its elements into 'an existing way of life' (Thomas 2008: 58). In conceiving the Mesolithic as essentially 'active in the changes of the fourth millennium bc' (Thomas 1996b: 320), the Neolithic is consequently positioned within an underlying framework of economic continuity for rather than transcending the subsistence strategies of the Mesolithic, the appearance of its elements are necessarily mediated through them. As a result, rather than indicating movement at the level of the economy, the presence of its elements are instead read culturally in terms of the way they signify the emergence of a new 'structure of ideas' (Thomas 1988: 65) concerning the nature of the natural world and its form of engagement such that the 'settling of the landscape is now seen as one of the transformative features of the Bronze Age, rather than the Neolithic' (Cooney 2003: 47).

Informing this approach is an evidential base that is itself devoid of the features of a sedentarised agricultural practice. Rather than exhibiting an agriculturally organised landscape structured around the presence of a permanent domestic architecture (Thomas 1996a: 4), occupation traces instead take the form of surface scatters of worked flint whose composition and distribution are seen as indicating a nomadic pattern of settlement centred upon the 'repeated ... frequenting of ... place' (Thomas 1999: 18). Supporting this interpretation is the preponderance of wild plant remains recovered from the carbonised assemblages of the early Neolithic (Moffett *et al.* 1989: 246) and the way these suggest an underlying continuity with the spatial practices of a seasonally variable resource base such that rather than being rooted in the landscape, settlement instead 'followed seasonal routes across ... it' (Cooney 2003: 47).



Within these patterns of movement the predominance of domesticated cattle characterising the faunal assemblages of the early Neolithic (Thomas 2008: 70) are consequently seen as representing the insertion of a pastoral adjunct to an economy whose essential features continued to remain Mesolithic (Thomas 2008: 67).

It is this insertion of domesticates within the pre-existent practices of a seasonally nomadic settlement pattern that frames the current reading of the Neolithic as a culturally induced process of change for rather than enhancing the calorific content of a subsistence strategy centred upon the cyclical rhythms of a naturally occurring resource base, the ritual context of these assemblages instead suggests that their significance was 'less dietary than ... symbolic' (Thomas 1999: 25). Indeed, it is the 'symbolic qualities of cattle' (Thomas 1999: 28) that are conveyed through their patterns of consumption for whilst it is at such sites that meat rich assemblages tend to be concentrated, none indicate 'extensive evidence for complex bone-processing, marrow-splitting and butchery marks ... that ... might be expected if the nutritional value of the carcasses were being exploited to the full' (Thomas 1999: 27). Instead these sites 'seem to have been concerned with the ... deliberate wasting or offering of the choicer parts of ... animals' (Thomas 1999: 27) and points to their consumption as a 'special resource, only to be killed and eaten at particular ... places and ... occasions' (Thomas 1993b: 387).

The same interpretative framework concerns the dietary importance of cereals for whilst present in the carbonised assemblages of the early Neolithic, they tend to exhibit low levels of concentration when compared to the evidence for a continued reliance upon collected food resources (Moffett *et al.* 1989: 246). Rather than representing a central dietary component, the 'general paucity of cereal' (Moffett *et al.* 1989: 243) recovered from these assemblages, together with the absence of weed floras appropriate to the practices of a plough agriculture (Moffett *et al.* 1989: 246), suggests that arable activity was not only episodic in character, but assumed the form of a 'transient hoe based horticulture' (Entwistle & Grant 1989: 208), whose patterns of shifting cultivation within small-scale clearances of limited duration (Moffett *et al.* 1989: 252) had

minimal impact for the calorific intake of a subsistence strategy that continued to remain derived from the movements of a seasonally nomadic settlement pattern. Indeed, where major concentrations of cereals have been found, they tend to have been recovered from 'special sites' (Thomas 1999: 25), whose ritually associated contexts are seen as representing 'specialised ... locations for a very special kind of food' (Thomas 1999: 25) such that, as with cattle:

“... domesticated ... resources, both animal and plant, had an importance in Neolithic Britain which was primarily symbolic. They were deployed in ritual ... as a means of drawing a distinction between the cultural and the natural ... Neither played a major part in feeding people from day to day, and these people were, from an economic point of view, still formally Mesolithic.” (Thomas 1993b: 388)

Within these patterns of seasonal movement, the mortuary architecture of the early Neolithic is seen as marking topographically significant locales (Barrett 1994: 136-137; Tilley 1994: 202-203) through which the wider landscape was itself domesticated since it is through the visible 'horizon of the tomb and its setting' (Tilley 1994: 205) that the cultural is projected onto the natural through an underlying principle of ancestry (Tilley 1994: 205). As a result the landscape was itself perceived and experienced through the spatial and temporal frameworks of its mortuary monuments (Tilley 1994: 204) and the way these construct a new understanding of place centred upon the fusing of the past with the present. It is this altered conception of place that the presence of domesticates, within the subsistence strategies of a seasonally nomadic settlement pattern, articulates and explains their deployment in the enculturing of death at times of periodic agglomeration, since it is through the ritual practices of the tomb and the relations these establish with the natural world that the Neolithic is symbolically elaborated as a 'process of becoming' (Thomas 1988: 63) through which new forms of subjectivity are constituted appropriate to subsequent movement at the level of the economy. As a result the Neolithic is conceived as:

“.... a social process, involving a range of new material culture as the basis of an altered relationship between people and the world around them ... In a social sense this process is seen as swift, in an economic sense it is perceived as much more gradual, involving the very slow replacement of wild by domesticated sources whose initial use and consumption may have been restricted and taken place primarily in ceremonial contexts. In this model, which has become the orthodox approach to the British Neolithic ... the settlement pattern is seen as being based on mobility, with a continuity from that of hunter-gatherers. The ceremonial sites ... provided fixed foci within these cycles of movement. It ... was not until ... the Bronze Age that field systems were established ...” (Cooney 2000: 35-36).

### 3.2 Underdetermination, economic movement and the evidential base.

This understanding of the Neolithic as a culturally induced process of change centred upon the Mesolithic recontextualisation of its elements is primarily derived from the evidential framework of central southern England. Whilst this can be used to support a conception of the Neolithic as an ‘ideational ... process’ (Cooney 2000: 36), it is not, however, the only way the evidential base can be read for, as Thomas notes, the facts do not ‘speak for themselves’ (Thomas 1999: 2). Instead they have to be interpreted and it is through this process of interpretation that the underdetermined nature of theoretical explanation is contained, for whilst the assumptions brought to their understanding necessarily shapes the way the evidence is constructed and read, the evidence cannot, of itself, verify the ultimate truth of any particular interpretation as the same facts can be read differently to support the assumptions of an alternative explanation.

This has implications for the perceived absence of synchronicity in economic and cultural movement framing the current reading of the Neolithic as a culturally induced process of change for in making ‘the assumption that ... indigenous hunter-gatherers ... were the prime movers’ (Cooney 2000: 36) in the ‘process of neolithisation’ (Cooney 2000: 36), the evidential base is necessarily read through an underlying framework of economic continuity. It is

this assumption of continuity that is, however, qualified through an alternative reading of the evidential base, for whilst the presence of domesticated resources within the subsistence practices of the Mesolithic can be seen as indicating movement at the cultural level, they can also be explained economically in terms of the way they represent movement beyond it.

It is this underlying movement at the level of the economy that an alternative reading of the archaeobotanical evidence demonstrates for whilst the predominance of wild fruit and nut bearing plants comprising the carbonised assemblages of the early Neolithic can imply a continuing reliance upon the subsistence strategies of a seasonally nomadic settlement pattern, they can also express the wider effects of landscape clearance (Rowley-Conwy 2004: 90; Mitchell & Ryan 2003: 162-163; Groenman-van Waateringe 1983: 227) as 'the opening up of ... woodland ... for agriculture would have given an opportunity for edible plant foods to thrive on the outer fringes of wooded areas in hedgerow or outskirts vegetation' (Cooney 2003: 49). As a result, rather than indicating a dietary intake centred upon the 'continued importance of wild plant foods' (Schulting 2008: 94), the carbonised assemblages of the early Neolithic can instead be read in terms of the way they represent the movement to a 'cereal-based economy' (Rowley-Conwy 2004: 90; Jones 2000: 81) that was itself 'supplemented by wild fruits and nuts' (Rowley-Conwy 2004: 90) consequent upon the incidental formation of a vegetation mantle (Rowley-Conwy 2004: 90) as the 'ecological consequence of Neolithic clearance' (Cooney 2003: 49).

Indeed, it is this alternative reading of the archaeobotanical evidence that the 'consistent presence of cereals' (Cooney 2003: 49) demonstrates and explains the relative scarcity of its remains compared to those emanating from the seasonally enhanced resources of these vegetation mantles for given that the grain was that part of the plant intended for consumption, cereal would have only entered these assemblages through the accidental burning of crops 'during food preparation or earlier stages of ... processing' (Jones 2000: 80). This contrasts with the overall predominance of hazelnut characterising these assemblages for not only is hazel 'favoured by some opening of the tree

canopy' (Moffett *et al.* 1989: 246) but, following extraction of the kernel, the shell would have had no further use outside that as a source of fuel or kindling (Rowley-Conwy 2004: 90; Jones 2000: 80). As a result not only does hazel have a greater probability of coming into contact with fire but, once exposed to its effects, it also exhibits a higher potential for survival as the density of the shell renders it capable of withstanding an 'intensity of charring that would destroy many other plant remains, including ... cereals' (Legge 1989: 218).

This understanding of the taphonomic factors, informing the formation of these assemblages, consequently suggests that not only is hazel 'more likely to be preserved ... in the archaeological record' (Rowley-Conwy 2004: 90) but cereal may also be under-represented within it, for not only was its preservation through charring accidental, but the waste generated through its processing was, itself, a valuable source of 'fodder or building material' (Jones 2000: 80) and, as such, may never have come into contact with fire (Jones 2000: 80). This necessarily renders any 'direct comparison of the relative quantities of hazelnuts and cereals meaningless' (Jones 2000: 81) and, in so doing, qualifies the current framing of the Neolithic as a culturally induced process of change for, rather than constituting a minor 'component in a much more broadly based subsistence strategy' (Entwistle & Grant 1989: 203), the carbonised assemblages of the early Neolithic can instead be read in terms of the way they represent 'a by-product of agricultural settlement' (Rowley-Conwy 2004: 90) such that, rather than informing an underlying assumption of continuity at the level of the economy, they are instead indicative of movement within it.

It is this movement at the economic level that the recovery of large assemblages of carbonised cereal from beyond the evidential framework of central southern England attests. Here, a series of burnt timber structures, dating to the 'first few centuries of the fourth millennium BC' (Noble 2006: 56), show 'evidence for substantial cereal cultivation' (Jones 2000: 83). Thus, at Balbridie, Aberdeenshire, an assemblage of 'some 20,000 cereal grains' (Fairweather & Ralston 1993: 316) dominated by 'emmer wheat with naked barley and bread wheat also occurring' (Cooney 2000: 40) were recovered from the sub-soil features of a burnt timber structure, whilst, at Claish, Stirlingshire,

forty cereal grains were identified from the post-pipe fills of a similarly proportioned structure and exhibited the same relative concentrations in barley and wheat as that informing the Balbridie assemblage (Miller & Ramsay 2002: 95). Significant assemblages of carbonised cereal have also been located at Ballygalley, County Antrim (Simpson 1996: 127), Richardstown, County Louth (Smyth 2006: 240), Corbally, County Kildare (Smyth 2006: 241) and Tankardstown, County Limerick, where 'over 1,000 ... cereal grains' (Cooney 2000: 40) were recovered from the hearth and foundation trenches of a burnt timber structure (Cross 2003: 199). Similarly, at Lismore Fields, Derbyshire, the grain and chaff of emmer wheat exhibiting a date range of 3990-3375 cal BC were recovered from the carbonised assemblages associated with the post-holes of two rectangular timbered structures (Garton 1991: 13, 19).

Underpinning these structures was the presence of a shared architectural vocabulary, whose curved terminals and rectilinear form not only referenced the domestic architecture of the central European longhouse (Cross 2003: 195) but reproduced its 'features ... on a monumental scale' (Bradley 2007: 42) such that, at Balbridie and Claish, respective ground plans of 22 by 11 and 24 by 8.5 metres were exhibited (Barclay *et al.* 2002: 106). The scale of these structures suggests they signified 'something beyond the ordinary' (Topping 1996: 166) such that rather than representing 'permanent cereal-based settlements' (Jones 2000: 83), they are instead regarded as 'conceptual or symbolic houses' (Smyth 2006: 244) through which the wider landscape was itself imprinted with an 'idealised domestic context' (Thomas 1999: 9).

Indeed, it is this symbolic referencing of a domesticated landscape that is not only conveyed through the accompanying dearth in crop-processing waste (Miller & Ramsay 2002: 95-96; Fairweather & Ralston 1993: 317), but explains the internal demarcation of space within these structures and the way their architectural elaboration in terms of a series of transverse screens positioned across the axial route of the entrance prescribed and compressed the directionality of movement and vision to a secluded and enlarged central area (Barclay *et al.* 2002: 125-126; Topping 1996: 164-166) whose pits, whilst showing evidence of burning, lack the 'elaboration and ... penetration of

oxidisation' (Cross 2003: 199) for them to 'have functioned as hearths' (Barclay *et al.* 2002: 78). Instead, their fills indicate 'transient episodes of burning' (Barclay *et al.* 2002: 77) such that, rather than representing the practices of 'a normal farmhouse' (Barclay *et al.* 2002: 131), these structures instead functioned as a 'domestic ritual monument' (Topping 1996: 170) through which new metaphorical relations were expressed with the natural world.

Framing this interpretation is an explanatory emphasis centred upon the symbolic significance of cereal and the way this causes its presence to be read in terms of the metaphorical contrasts it establishes with the wild. However, as Fairbairn notes, in emphasising the symbolic importance of cereal, such a reading 'explicitly denies that ... domesticates had calorific importance' (Fairbairn 2000: 111), yet it is this that is suggested by the scale of such assemblages. Indeed, it is in the calorific value of cereal that its symbolic importance is derived as 'growing ... plants, that would otherwise appear at random, in a place of ... choice, could have seemed ... magical ... and been treated with ... circumspection and awe' (Barclay *et al.* 2002: 126). As a result it 'is not surprising that deliberate deposits of ... grain would be made at appropriate times and places' (Cooney 2000: 41) such that rather than representing ritual nodes for the symbolic opposition of nature, these structures can instead be explained in terms of the way their spatial complexity articulates the cultural effects of an agriculturally organised landscape for 'what is clear from the Balbridie assemblage and ... other evidence is that in some areas cereal growing ... was being carried on a substantial scale' (Cooney 1997: 27).

This necessarily raises the issue of what is meant by agriculture. Initially emerging in the fifteenth century as a 'word ... used to refer to the tending of crops ... or ... animals' (Bocock 1992: 231), its meaning has subsequently expanded such that the term is now used to reference a modernist form of landscape organisation centred upon the 'combination of sedentaryness ... in a permanently occupied structure ... cultivation ... in defined ... fields, the keeping of ... animals ... and a proprietary or territorial relationship with land' (Thomas 1999: 222). It is the projection of this understanding onto the past that not only underwrites Childe's conception of the Neolithic as marking a

'revolution ... in subsistence practice' (Thomas 1999: 222), but explains the post-processual reaction to an economic reading of its material culture and the way this causes its elements to be locked into 'a fixed model involving sedentary settlement' (Cooney 2000: 34). Hence the current emphasis accorded to a peripatetic reading of the Neolithic for, in deconstructing the modernist association of agriculture with the landscape features of a sedentarised agricultural practice, its traces are automatically separated from the economy and any understanding of movement in it. Instead, agriculture is accorded a symbolic presence.

It is this cultural framing that is, however, rendered problematic by these assemblages for, as Cooney notes, the 'clear implication of cereal production is that alteration of the landscape was taking place for agricultural purposes' (Cooney 2000: 41). Rather than representing the symbolic emergence of a 'new relationship between people and the land' (Cooney 2000: 39), these assemblages instead mark the appearance of a 'new attitude to the landscape' (Cooney 2000: 43) as the cultivation of cereal required both 'clearance and intervention in ... the very clothing of the land, altering it under human control and precluding other uses' (Fairbairn 2000: 115).

This suggests that the appearance of domesticates was not without economic effect and it is this that establishes the conditions for an alternative conception of agriculture, for rather than associating its presence with the movement to a specific form of subsistence and settlement practice, its essence, instead, resides in the way its forms of engagement with the natural world not only altered its fundamental character, but changed the nature of its relation with the social. It is this capacity of agriculture to reconfigure the form of this relation that facilitates an understanding of its presence as initiating broader movement at the level of the economy for not only were 'domesticated ... resources ... the cause of landscape alteration' (Cooney 2000: 42) but, through their material effect, they simultaneously transcended the undifferentiated conception of culture and nature informing the subsistence practices of the Mesolithic for 'instead of using woodland, woodland cover was removed and replaced by plants introduced by people' (Cooney 2000: 41).



It is this changing configuration in the natural and social worlds that underwrites the evidential base of central southern England. Here, 'palaeoenvironmental evidence from the southern British chalklands ... indicates considerable opening up of the landscape from the earlier part of the Neolithic' (Cooney 2000: 44), both in terms of the recorded 'increase in grass, cereal and weed pollen ... associated with ... agriculture' (Lawson 2007: 38) as well as in the way the profiles of those soils recovered from the sealed land surfaces of its mortuary monuments consistently demonstrate a generalised sequence of 'woodland clearance ... cultivation and ... open conditions, typically vegetated with grassland or scrub ... prior to the construction of the barrow in the early fourth millennium BC' (Darvill 2004: 96).

This underlying movement in the relation of the natural to the social is further documented through the specific environmental histories of the Stonehenge and Avebury regions. Thus, with regard to the Stonehenge environment, anthropogenic modification of the landscape is indicated through the changing character of the vegetation structure, for whilst palaeoenvironmental sampling of the three post-pipe fills dating to the early Mesolithic points to the presence of an 'open mixed pine and hazel woodland' (Allen 1995a: 55), the 'early Neolithic environment ... as indicated by charcoals suggested mixed woody and shrub vegetation ... contrasting significantly with ... pollen evidence for the early Mesolithic' (Allen 1995a: 56). For Allen, the appearance of this vegetational structure was the direct result of 'significant human interference ... in the composition and nature of ... woodland' (Allen 1995a: 56) and its impact not only 'indicates that comparatively large areas of the Stonehenge landscape had been cleared to varying degrees' (Allen 1995a: 56) but, once opened, changed the original character of the 'wildscape' as clear-felled areas were 'subsequently allowed to regenerate' (Allen 1997: 127). The result was the formation of a landscape characterised by 'a complex mosaic of vegetation types' (Allen 1997: 127) as anthropogenic intrusion interspersed 'areas of ancient denser woodland' (Allen 1997: 127) with pockets of 'light open ... woodland and clear-felled areas of shrubs and grassland for grazing, browse, cultivation and occupation' (Allen 1997: 127).

A similar process of landscape alteration is documented for the Avebury region. Here, there is 'no evidence for permanent or large-scale human activity ... during the later Mesolithic' (Gillings *et al.* 2008: 180) and it is 'only during the early Neolithic that woodland clearance and soil disturbance can be documented on any scale' (Pollard & Reynolds 2002: 30). As with the Stonehenge landscape, palaeoenvironmental evidence derived from soils sealed beneath its mortuary monuments reconstructs the early Neolithic as a 'fluid mosaic of woodland and small areas of more open or cleared ground' (Whittle *et al.* 1999: 347), whilst, at Avebury and West Overton, the hydrological effects associated with woodland clearance are demonstrated through paludification, flooding and the deposition of alluvial silts on the floor of the upper Kennet valley (Gillings *et al.* 2008: 188; Evans *et al.* 1993: 186-187). Pollen extracted from soil preserved beneath the Horslip long barrow provides evidence of anthropogenic change in the post-glacial vegetation structure resulting from clearance, cultivation and open conditions of grassland and if the dating of its construction to '4350-3650BC is accepted ... then this sequence ... took place before ... 3650BC at the latest, and is the earliest evidence for clearance in the region' (Gillings *et al.* 2008: 184).

Evidence of soil disturbance as the anthropogenic effect of cultivation is also indicated at the South Street long barrow. Here, agricultural preparation of clear-felled areas is documented through the presence of a buried soil dating to c.3660-3370BC (Gillings *et al.* 2008: 185). Sealed at the base of this soil and 'scored into the subsoil surface were two sets of grooves filled with humic material ... crossing each other roughly at right angles' (Ashbee *et al.* 1979: 282). These are 'interpreted as the marks of cross-ploughing' (Ashbee *et al.* 1979: 282) and indicate the use of a rip-ard (Smith 1984: 109) to 'break up the original woodland soil and tear out tree roots' (Ashbee *et al.* 1979: 296) as well as facilitating the 'removal of sarsen boulders' (Ashbee *et al.* 1979: 296). Variation in the orientation of these marks suggest that there had been 'more than one episode of ploughing' (Ashbee *et al.* 1979: 282) and the subsequent presence, within the barrow mound, of sarsen boulders that had 'once rested in the soil' (Ashbee *et al.* 1979: 282) provide further 'indications of purposeful soil disturbance' (Whittle 1996: 235). The majority were sited 'on the old ground

surface' (Ashbee *et al.* 1979: 261) in the 'southern half of the barrow' (Ashbee *et al.* 1979: 282), suggesting that 'it was in this direction that the ... cultivated edge lay' (Ashbee *et al.* 1979: 264) and there is 'no doubt that ... the stones were in the position in which they were lying when the mound was built' (Ashbee *et al.* 1979: 261) as there was 'no evidence in the tip lines of mound material that the sarsens had once been arranged in any kind of structure which had subsequently collapsed' (Ashbee *et al.* 1979: 261). Dating of the barrow to 3490-3020 BC (Gillings *et al.* 2008: 185) by means of an antler embedded within the coombe rock of the mound material positions this initial phase of soil disturbance within the second quarter of the fourth millennium BC.

For Smith, the 'level of energy expended in preparing the site for arable use ... rules out the notion that this is transient agriculture' (Smith 1984: 109). Yet, it is this that is advanced through a cultural reading of the evidence for, in rejecting the modernist conception of the Neolithic as the 'time when settled ... farming appeared fully formed to transform the way people lived their lives' (Smith & Brickley 2009: 9), the 'absence of any solid domestic architecture is taken to indicate varying degrees of settlement mobility' (Gillings & Pollard 2004: 27) such that the 'distinction between earlier mobile Mesolithic communities and still mobile Neolithic groups might not be marked' (Pollard & Reynolds 2002: 31). As a result rather than indicating movement at the level of the economy, the lack of any 'unambiguous evidence for sedentary settlement' (Pollard & Reynolds 2002: 40) necessarily positions agriculture within the pre-existent practices of a seasonally nomadic settlement pattern such that where evidence of cultivation exists, it is seen as being conducted in 'small ... plots ... returned to on an episodic basis, rather than fields as such' (Pollard & Reynolds 2002: 41).

In associating economic movement with the emergence of a sedentarised agricultural practice, the absence of its features in 'the archaeological record ... of ... southern Britain' (Pollard & Reynolds 2002: 31) consequently causes agriculture to be located within an underlying framework of economic continuity. It is this assumption of continuity with the spatial practices of the Mesolithic that is, however, open to challenge for alongside the evidence for clearance and

cultivation, a peripatetic reading of the Neolithic is also rendered problematic by the nature of the settlement evidence. Whilst such evidence exists 'mainly in the form of lithic scatters ... interpreted as ... the cumulative result of many short-stay ... episodes ... across the landscape' (Cooney 2000: 44), the results of surface collection survey also provide 'evidence of more established settlement patterns' (Darvill 2004: 188) as 'discrete localities yielding high densities can be discerned amidst the general low density scatter of flints evident in ... southern Britain' (Holgate 1988: 67).

For Holgate, these localities 'consistently yield ... assemblages that contain both a high ratio of implements to debitage, and ... specific types of implement ... scrapers, piercers, knives, microdenticulates, ovates, fabricators, rods, notched flakes, arrowheads and ground flint axe flakes and fragments that have subsequently been reworked as cores' (Holgate 1988: 50-51). This 'range of implements ... characteristic of a variety of activities' (Holgate 1987: 260) is interpreted by Holgate as representing the 'settlement residues of ... domestic sites' (Holgate 1987: 260) and their spatial distribution is indicative of a landscape structured upon 'discrete blocks of settlement' (Holgate 1988: 150). These settlement blocks were, in turn, 'associated with clusters of ... tombs' (Holgate 1988: 132) and their spatial correspondence with these scatters of high density flint consequently suggests that the 'idea of fully peripatetic communities does not easily fit the archaeological evidence' (Darvill 2004: 201) for, within these areas of settlement, it is possible to link 'each long barrow ... to a nearby occupation area' (Darvill 2004: 197).

Supporting this interpretation is the tendency for barrows to have been sited in 'established clearings that had formerly marked the edge of settled and/or cultivated ground' (Pollard & Reynolds 2002: 41). Thus, at South Street, following the initial phase of cross-ploughing, further disturbance of the original land surface is indicated through the 'lateral and irregular movement of ... soil' (Ashbee *et al.* 1979: 282) resulting from a 'less vigorous and shallower form of tillage' (Ashbee *et al.* 1979: 296), whilst the formation of a thin turf-line in the upper part of the soil profile suggests an 'environment of grassland ... immediately prior to the construction of the barrow' (Ashbee *et al.* 1979: 282).

Similarly, at Horslip, 'open conditions obtained when the barrow was built' (Ashbee *et al.* 1979 : 211) and palaeoenvironmental sampling of the sealed land surface suggests that 'initial clearance may have been for arable' (Dimbleby 1979: 277) as pollen evidence points to the presence of 'cereal crops on the site or in the vicinity' (Ashbee *et al.* 1979: 211). Likewise, at Beckhampton Road, molluscan and pollen evidence derived from the original land surface of the monument suggests that the 'barrow had been built in an area of long-standing grassland ... with ... arable ... nearby' (Ashbee *et al.* 1979: 244) whilst, at Easton Down, the 'old land surface beneath the barrow contained a turfline dated to 3630-3440BC' (Gillings *et al.* 2008: 186). Here, 'molluscan evidence suggests that clearance of the existing woodland occurred ... culminating in grassland with a vegetation boundary' (Gillings *et al.* 2008: 186) as 'close horizontal sampling of the buried surface showed variation in the spatial representation of open country indicators' (Whittle 1993: 40), suggesting that the 'barrow may have been placed on the edge of ... cultivated land' (Whittle 1993: 40) as 'plant remains show ... evidence of cereals in the area' (Gillings *et al.* 2008: 186). Finally, at Millbarrow, the remnants of a buried soil 'indicates disturbance or cultivation' (Whittle 1993: 40), whilst 'molluscan fauna indicative of ... grassland' (Gillings *et al.* 2008: 186) from the 'primary fill of the outer ditches ... suggest that the barrow was constructed in an open environment' (Gillings *et al.* 2008: 186).

This tendency for barrows to have been sited 'on the edge of ... cleared ground' (Darvill 2004: 201) was not confined to the Avebury landscape. Thus, at the neighbouring site of Wayland's Smithy, Oxfordshire, disturbance of the soil profile suggests 'an earlier phase of ... cultivation' (Whittle 1991: 92), whilst the 'presence of struck flint, pottery ... a broken stone axe ... and ... querns ... is consistent with ... settlement' (Whittle 1991: 92). Similarly, at Hazleton North, Gloucestershire, early Neolithic occupation deposits sealed within the original land surface of the monument contained 'a range of material including evidence for cereals and cereal processing' (Meadows *et al.* 2007: 46), whilst the barrow itself was constructed in open conditions of 'scrub with areas of ... cultivation nearby' (Darvill 2004: 93). This locational tendency also finds expression beyond the evidential framework of central southern England. Thus, at

Skendleby, Lincolnshire, the Giant's Hills 2 barrow was constructed 'close to the edge of cultivated land' (Field 2006: 79) whilst, at Kilham, in the East Riding of Yorkshire, there were 'two phases of cultivation noted in the pre-barrow soil profile' (Field 2006: 79). Similarly, in Scotland, both 'Dalladies and Pitnacree were ... sited on formerly cultivated land' (Field 2006: 79).

This spatial correspondence with the material traces of an agricultural presence is seen, by Thomas, as representing the symbolic elaboration of a 'landscape which was already composed of significant locations' (Thomas 1999: 203) in terms of the practices associated with them. As a result, rather than constituting a 'random sample of the prehistoric landscape' (Thomas 1999: 24), the evidential framework derived from those land surfaces sealed beneath the mortuary architecture of the early Neolithic is consequently viewed as being 'more indicative of the micro-environment of the monument than of the broader surroundings' (Thomas 1999: 26), for not only were these structures 'built in parts of the landscape which had been cleared ... prior to construction' (Thomas 1999: 26), but, in those 'areas remote from monumental complexes' (Thomas 1999: 26), the palaeoenvironmental evidence is, instead, suggestive of 'low levels of clearance' (Thomas 1999: 26).

It is the perceived atypicality of these soils that frames a cultural reading of these monuments as forming symbolic nodes within an economically unaltered landscape for in monumentalising those places which had already acquired 'significance in the landscape' (Bradley 2007: 38), these structures effectively rendered permanent the 'meanings associated with these locations' (Pollard & Reynolds 2002: 62). As a result rather than denoting movement at the level of the economy, the importance of these land surfaces is instead seen to reside in the new frameworks of understanding these practices give to a seasonally nomadic settlement pattern concerning the nature of the natural world and the form of its relation with the social. It is this altered framework of cultural understanding that is topographically conveyed through the mortuary architecture of the early Neolithic and explains the 'intensity of clearance and land use' (Thomas 1999: 26) at these sites since it is through the ritually charged meanings generated by these practices at times of periodic

agglomeration that 'different kinds of human being' (Thomas 1999: 224) are created appropriate to the subsequent 'transformation of landscapes and the ways in which they were inhabited' (Thomas 1999: 223).

For Darvill, whilst this understanding offers a 'tempting and seductive model' (Darvill 2004: 188) concerning the appearance of agriculture it, however, requires 'relatively little archaeological evidence to support it' (Darvill 2004: 188). Indeed, underpinning its explanatory framework is the 'apparent poverty of evidence for structures that could be considered as long-term houses or settlements' (Darvill 2004: 188) and the way this opposes the modernist association of the Neolithic with the movement to a sedentarised agricultural practice. It is the theoretical effects generated by this opposition, however, that constitutes the 'central fallacy' (Rowley-Conwy 2004: 98) of the post-processual framing of the Neolithic as a culturally induced process of change, for it is through the articulation of the categories of modernist knowledge and their interrogation through the evidential base that agriculture is 'lifted out of the domestic context and placed in a ritual one' (Rowley-Conwy 2004: 98-99), such that, rather than representing the material indices of an underlying movement at the level of the economy, the presence of its elements are, instead, read culturally in terms of the way their meanings symbolically establish the preconditions for such movement whose realisation was not fully effected in 'southern Britain until the Middle Bronze Age' (Thomas 1999: 16).

It is this cultural reading that is, however, underdetermined by the nature of the evidential base and the way this opens the possibility for an alternative conceptualisation of the Neolithic centred upon the agricultural reconfiguration of the natural and social worlds. It is this, however, that is obscured through the post-processual adherence to modernist categories of knowledge and the way these establish the default conditions for an underlying assumption of Mesolithic continuity consequent upon the absence of those features concerning the presence of a sedentarised agricultural practice. However, rather than the resultant decoupling of agriculture from the economy afforded by this, it is apparent from the palaeoenvironmental and archaeobotanical evidence that the appearance of Neolithic elements transcends those forms of

landscape engagement characterising the subsistence strategies of a seasonally nomadic settlement pattern. Indeed, it is this underlying movement in the fundamental character of the landscape that is spatially conveyed through the land surfaces, mortuary architecture and lithic scatters of central southern England and the relations they establish with the natural world are replicated through the wider evidential framework.

Thus, throughout the Irish evidential base, anthropogenic modification of the vegetation structure is indicated through the consistent association of cereal pollen with woodland clearance (Bradley 2007: 42; Cooney 2000: 12). However, whilst the 'pollen record suggests that the first clearances were taking place before the earliest dated Neolithic sites' (Mitchell & Ryan 2003: 160), that such activity was confined to a Neolithic horizon is supported through the 'view that the earliest reliable evidence for cereal pollen corresponds with well-contexted and dated macro-fossil evidence for cereal production, from around 4000 BC' (Cooney 2000: 40), such that, rather than providing evidence of a Mesolithic horizon for the appearance of agriculture, both the 'pollen and macro-fossil evidence can be taken to indicate that cereal cultivation was taking place from the Early Neolithic on' (Cooney 2000: 40).

Supporting this interpretation of the environmental evidence is the corresponding emergence of a rectilinear domestic architecture, whose radiocarbon determination from preserved structural timbers indicates a 'construction ... period from c 4050-3850 bc' (Grogan 2004: 111). Whilst the ground plans exhibited by these structures display a reduction in scale compared to those characterising the evidential framework of lowland Scotland (Smyth 2006: 241; Armit *et al.* 2003: 146), they do, however, share the same architectural principles of spatial order concerning the control of movement and vision to an enlarged segmented area (Cooney 2000: 59-61) consequent upon the internal 'shielding of important spaces' (Noble 2006: 69). Similarly, as with the Scottish examples, whilst these spaces show 'evidence of internal fires ... few formal hearths are represented' (Grogan 2004: 107) such that, rather than representing the settlement structures of an evolving agricultural practice, they are instead seen as signifying the emergence of a '*monumentalizing* behaviour'



(Smyth 2006: 244) whose architectural form symbolises 'new ways of living in ... the ... landscape' (Smyth 2006: 244).

Underpinning this form of explanation is the theoretical 'privileging of ritual over domestic activity' (Cooney 1997: 29) such that the 'domestic purpose of such buildings' (Cooney 1997: 25) is underplayed in favour of their interpretation as 'big houses' or 'cult houses' (Brophy 2007: 89; Topping 1996: 166) whose associated practices engender new forms of identity for a peripatetically dispersed population (Cooney 1997: 25). However, as Cooney notes, this 'division between domestic and ritual is clearly an inadequate response' (Cooney 2000: 57) for understanding the interrelated context of human behaviour and 'seems to miss the point that daily life is permeated with ritual' (Cooney 1997: 29). Rather than separating the economic from the cultural, it is the resonances generated between them that is conveyed through the spatial features of these sites and explains their wider evidential framework for where large-scale excavation has occurred, it is clear that these structures 'do not ... form isolated features' (Grogan 1996: 56) as extensive areas of associated domestic activity have been identified in the form of 'ancillary buildings, hearths, pits, work areas, shelters or huts, paved or cobbled yards and, infrequently, evidence for some element of enclosure' (Grogan: 1996: 56).

Defining these external features are the faunal remains of domesticated cattle, together with assemblages of charred cereal and its associated processing waste (Smyth 2006: 240; Cross 2003: 199), as evidenced in the presence of large amounts of chaff at both Corbally (Cross 2003: 199) and Tankardstown (Cooney 2000: 40) and the recovery of saddle querns from Ballygalley, Corbally, Ballyharry, County Antrim, and Thornhill, County Derry (Smyth 2006: 241). Evidence of cultivation has also been located in the form of ard-marks at Ballygalley, together with the recovery of an ard fragment at Ballyharry (Smyth 2006: 241), whilst the high levels of cereal pollen recorded at Drummenny Lower, County Donegal, suggests that arable activity occurred in close proximity to these sites (Smyth 2006: 241) and is supported through 'traces of possible fence lines uncovered at Cloghers and Kilgobbin' (Smyth 2006: 241) in Counties Kerry and Dublin.

As with the variable composition in lithic scatters characterising the evidential base of central southern England, the nature of this activity clearly calls 'into question ... the tenets' (Bradley 2007: 42) of a peripatetic reading of the Neolithic for rather than supporting an underlying assumption of continuity at the level of the economy, the presence of these structures can instead be read in terms of the way they represent the emergence of 'persistent, long-term settlement locales' (Cooney 2003: 50) whose practices act as a foci for the wider engagement of the landscape (Cooney 2000: 74-77). Supporting this interpretation is not only the evidence for 'continuous occupation of the same location' (Grogan 2004: 109), as exhibited through 'successive phases of repair or rebuilding' (Grogan 2004: 109) at Ballygalley, Ballyharry, Corbally, Kishoge, County Dublin and Granny, County Kilkenny (Grogan 2004: 109; Smyth 2006: 243), but the tendency displayed by these structures to consistently demonstrate a locational preference for 'sheltered south ... facing slopes' (Grogan 1996: 57) possessing 'light, well-drained soils ... overlooking a major source of water' (Cooney & Grogan 1998: 462) with 'easy access to different types of soil conditions' (Cooney & Grogan 1998: 462).

Replicating this locational preference for mid-slope positions with light soils favourable to agricultural practice is the mortuary architecture of the court tomb (Mitchell & Ryan 2003: 165; Cooney 2000: 138) whose spatial connections with this pattern of landscape engagement is not only conveyed through the deposition of domestic assemblages of pottery and worked flint associated with the ritual practices of their chambers (Mitchell & Ryan 2003: 165-166), but in the way their floors exhibit a tendency to be covered with a 'charcoal-rich soil similar to that in settlements' (Bradley 2007: 60). Indeed, at Ballyglass, County Mayo, this spatial connection is rendered direct through the presence of two court tombs whose siting 'overlie the remains of wooden structures' (Bradley 2007: 50) such that, at Ballyglass 1, a 'rectangular house marked by postholes and foundation trenches was found beneath the western end of the cairn' (Cooney 1983: 179) of a central court tomb, whilst, at Ballyglass 2, excavation 'exposed the plans of three separate structures' (Bradley 2007: 50). In each case not only did the layout of the monuments acknowledge the position of these structures (Bradley 2007: 50), but the contemporaneous nature of this

change in form is indicated at Ballyglass 1, where it appears that the 'house was ... deliberately demolished to make way for the ... tomb' (Cooney 1983: 181).

For Grogan, these spatial connections indicate 'Neolithic perceptions of centrality within the ... landscape' (Grogan 2004: 112) consequent upon the integrated 'association of sacred and secular activity' (Grogan 2004: 112) for whilst the pollen evidence indicates that 'some ... clearances were short-term' (Cooney 2003: 49), there is also evidence for 'substantial, maintained long-term clearances' (Cooney 2000: 36) in woodland cover. Thus, at Lough Sheeauns, County Galway, there is 'pollen evidence for clearance and sustained farming activity through much of the Early Neolithic' (Cooney 2000: 36), whilst at Glencloy, County Antrim, environmental evidence points to a 'major clearance lasting up to 400 years in the Early/Middle Neolithic, with indications of pastoral activity and the sustained presence of cereal pollen' (Cooney 2000: 36). Here, a 'range of Neolithic sites indicates ... extensive utilisation of the ... landscape' (Cooney 2000: 77) centred upon the 'location of ... main settlement foci in strategic, low-lying ... valleys' (Cooney 2000: 77) appropriate to the 'exploitation of flint on the coast' (Cooney 2000: 77), together with the seasonal use of uplands for 'grazing above the more intensively used valleys' (Cooney 2000: 47) as evidenced through the presence of 'Neolithic boundaries on the Antrim plateau' (Cooney 2003: 50). Inserted within this socially constructed landscape and positioned 'upslope from ... the main foci of settlement' (Cooney 2000: 77) were a series of court tombs.

Similarly, at Céide Fields, County Mayo, a series of court tombs are distributed through a coaxial field system interspersed with settlement enclosures (Cooney 2000: 25-26; Cooney 1997: 28; Caulfield 1983: 196). Dating to 3700 BC (Bradley 2007: 43) and covering an area of 1000 hectares (Scarre 2007: 127), not only does the size of the fields indicate that 'they were primarily organised for a grass crop' (Caulfield 1983: 200), but the height of the walls suggests 'functional barriers capable of retaining cattle' (Caulfield 1983: 200) such that, in the warmer climatic conditions of the Neolithic (Caulfield 1983: 203), their 'most likely function ... was the organised management of cattle grazing in ... an

almost year-round grass growing season' (Cooney 2000: 28). Evidence of cultivation is also present in the form of pollen indicators concerning the presence of cereal and is further supported through the recovery of stone ard shares and ard marks from the site (Cooney 2000: 28). A similarly structured landscape has also been located twelve kilometres to the east of Céide Fields, at Rathlackan, where a rectangular field system comprising court tombs and settlement enclosures stretching over an area of ten square kilometres has been dated to the mid-fourth millennium BC (Cooney 2000: 46).

For Cooney, the significance of this evidential framework resides in the way it 'runs counter to the image of the ... landscape' (Cooney 1997: 29) generated through a peripatetic reading of the Neolithic for in contrast to its current framing as a 'period when people were on the move within landscapes that were largely unaffected and unstructured by their subsistence activities' (Cooney 2000: 51), it is clear from the Irish context that agriculture was a 'major source of food supply ... and was carried out in an organised way' (Cooney 2000: 37). As a result the 'Irish evidence can be seen as providing an alternative perspective on the Neolithic' (Cooney 1997: 31) that affirms that reconfiguration of the natural and social worlds apparent within the evidential base of central southern England as the bounding of the landscape consequent upon the need to control the movement of livestock within the constraints imposed by a combined pastoral and arable subsistence strategy necessarily qualifies an interpretation of their faunal assemblages as place-free (Cooney 2000: 44-45). Clearly, as with cereal, cattle had cultural significance in terms of the way they symbolised new forms of landscape engagement resulting from the changing configuration of the natural and social worlds – as evidenced in the 'head and hoof' burials associated with the ritual practices of earthen long mounds (Ashbee 1984: 75-76; Ashbee 1966: 65-66), together with the deliberate positioning of three ox skulls along the axial line of the Beckhampton Road long barrow (Ashbee *et al.* 1979: 247), but they also possessed calorific value, both in terms of slaughter as well as in the evidence concerning the regulation of herd composition appropriate to the obtention of secondary products associated with the advent of dairying – as indicated through the age and sex composition of bone recovered from faunal assemblages (Bradley 2007: 46; Rowley-Conwy 2004:

91; Legge 1989: 230-236), together with the way the chemical analysis of 'lipid residues in pottery has confirmed the presence of milk from the Early Neolithic onwards' (Schulting 2008: 98). Rather than indicating continuity at the level of the economy, the 'complementary character of these resources' (Cooney 2000: 45) consequently implies some form of 'stability in the settlement system' (Cooney 2000: 39) appropriate to the maintenance of the 'crop at all stages from ground preparation and sowing to harvesting to storage' (Cooney 2000: 39), as well as ensuring that livestock were 'kept off tillage patches at critical times' (Cooney 2000: 45), whilst, at other points, they would be returned to such areas as a source of manure and traction (Rowley-Conwy 2004: 91-92; Cooney 2000: 45). Rendering these practices intelligible were the frameworks of cultural meaning brought to their understanding and it is this that explains the 'closely linked patterns of tomb and settlement distributions' (Grogan 2004: 112) exhibited through the evidential base, since it is through the ritual association of agriculture with an ancestral presence that the settlement pattern is accorded temporal stability appropriate to the cyclical reproduction of those forms of landscape engagement entailed by a subsistence strategy centred upon the utilisation of a domesticated resource base, and it is this 'perceived integration of the sacred and secular landscapes' (Grogan 2004: 112) that is conveyed through the presence of ard furrows at South Street, as well as in the way at Millin Bay, County Down, a 'megalithic cist ... had been constructed so as to preserve within its cairn part of the line of an earlier stone wall' (Mitchell & Ryan 2003: 186-187).

Supporting this interpretation is the recovery of domesticated cattle bone from a midden associated with two subrectangular domestic structures at the enclosed Neolithic settlement of Clegyr Boia, Pembrokeshire (Vyner 2001: 80; Tilley 1994: 90). Located three kilometres to the north of the settlement and one kilometre from each other is the chambered cairn of Coetan Arthur and the paired rectangular chambered monument of Carn Llidi (Vyner 2001: 86), whose structural integration within a unified landscape centred upon the enclosure is suggested through the shared intervisibility they have with each other and Clegyr Boia (Vyner 2001: 87; Tilley 1994: 90). Pottery recovered from the settlement was similar to that retrieved from the double chambered monument

of Dyffryn Ardudwy, Gwynedd, and 'implies an early Neolithic date' (Cummings & Whittle 2004: 27) for the enclosure. Similarly, at the enclosed settlement of Carn Brea, Cornwall, 'ancient field lay-outs have been located ... in close proximity to the site on south and southwest facing slopes' (Mercer 2001: 47), with the site itself being set on a spur which not only 'overlooks a good flowing water source' (Mercer 2001: 47), but is surrounded by 'ground ... that would ... have furnished both good grazing and arable resources' (Mercer 2001: 47). Enclosed within its perimeter were a 'series of ... terraces upon which domestic structures ... constructed of timber, appear to have been built' (Mercer 2003: 59) and incorporated into its walls were 'natural granite tors' (Mercer 2003: 62) whose shape resembles the early Neolithic mortuary form of the portal dolmen (Bradley 1998b: 15) which, in south-west Britain, is 'generally found near to walled enclosures' (Bradley 1998b: 15) and suggests contemporaneity with them (Bradley 1998b: 19).

This spatial integration of the economic and the cultural is also evidenced at the North Uist settlement site of Eilean Domhnuill. Positioned within a landscape characterised by a dense concentration of chambered tombs (Parker Pearson 2004: 130-131; Parker Pearson *et al.* 2004: 34;), this causewayed islet site experienced successive phases of rebuilding during a period of occupation ranging from '3650-2600 cal BC' (Armit 2003: 93). Its lowest recorded levels span the period from '3650-3500 cal BC' (Armit 2003: 95) and are characterised by a series of small, single, elongated rectangular structures with rounded corners, central hearths and external activity areas, accessed by a short passage set within an indented and screened façade of palisaded stone slabs whose entrance was approached by means of a timbered causeway (Armit 2003: 93-96; 1996: 46-48). Within the interior of the site evidence of a subsistence strategy centred upon a combination of pastoral and arable activity is present in the form of sheep and cattle bone (Armit 1996: 64) together with 'large quantities of the burnt ... remains' (Parker Pearson *et al.* 2004: 41) of barley and wheat. The setting of a substantial saddle quern in the floor of one of the structures also indicates that cereal processing was conducted on the site (Armit 2003: 94; 1996: 64). The site also references the architecture of the Hebridean round cairn, both in terms of the way its façade, entrance corridor

and stone slabbed perimeter mirror the indented forecourts, passages and circular peristaliths of its surrounding mortuary monuments (Armit 2003: 98), as well as in the way the ground plans of its enclosed domestic structures replicate the 'single-cellular forms of the ... chambers' (Parker Pearson *et al.* 2004: 37). These monuments tend to occupy 'prominent locations on the slopes of ... hills' (Armit 1996: 77) such that rather than being 'sited for maximum visual impact' (Armit 1996: 77), they instead 'relate to specific tracts of land' (Armit 1996: 77) and, given the palaeoenvironmental evidence concerning the 'controlled ... cropping and grazing' (Armit 2003: 99) of the wider landscape coupled to the possibility that other causewayed islets might equally represent potential sites of Neolithic settlement (Armit 1996: 52), suggests the emergence of a socially structured landscape whose forms of cultural perception express the changing configuration of the natural and social worlds consequent upon the advent of agriculture.

This structuring of the landscape through the cultural frameworks of an agricultural presence is also evidenced at the Orcadian settlement site of Knap of Howar, Papa Westray. Exhibiting a 'potential chronological range ... between ... 2800 and 3800 bc' (Ritchie 1983: 57), the 'actual duration of the settlement is unlikely to have exceeded 500 years' (Ritchie 1983: 57) and is positioned within the 'period ... 3500-3100 bc' (Ritchie: 1983: 44). The site itself comprises two stone-built double faced rectilinear structures, each possessing rounded corners and linked by means of a conjoining passage set within the walling at the point where their sides abut (Ritchie 1983: 42-43). Each structure was positioned within a pre-existent midden (Ritchie 1983: 44) which was both levelled beyond the ground plans of the buildings and removed from their interiors (Ritchie 1983: 45) in order to provide an insulating core for the walling (Ritchie 1983: 48, 52). Internally each structure contained a central hearth (Ritchie 1983: 46, 51) and was sub-divided into a series of compartments (Ritchie 1983: 42-43) delineated through the partial setting of opposed pairs of upright stone slabs in the inner walling (Ritchie 1983: 42-43). Projecting outwards from the side walls of some of these compartments were low benches or platforms whose interiors could be divided through the right angled setting of upright slabs to the walling (Ritchie 1983: 42-43). The larger

structure, House 1, is interpreted as being primarily domestic in function (Ritchie 1983: 42) – although the contrasting floor deposits exhibited by its two compartments suggests additional forms of activity (Ritchie 1983: 46), whilst the smaller structure of House 2 is regarded as ancillary in function (Ritchie 1983: 46) – as suggested by the five recessed spaces of the ground level walling defining its compressed inner-most compartment together with those set higher to receive some form of shelving (Ritchie 1983: 43).

Evidence of a subsistence strategy centred upon the presence of a mixed agricultural practice is indicated through the equal recovery of sheep and cattle bone from the site, the primitive variants exhibited in livestock by these assemblages suggesting recent domestication (Noddle 1983: 99). Similarly, the ‘recovery of a few grains of barley from the midden and of wheat pollen from the contemporary buried soil ... indicates that cereal cultivation was part of the economic pattern’ (Ritchie 1983: 56). Supporting this interpretation is the evidence for cereal processing in the form of a ‘massive trough quern’ (Ritchie 1983: 43) located on the floor of the inner compartment of House 1, whilst the low age of slaughter exhibited through the faunal remains of cattle suggests possible strategies of herd management relating to secondary practices of dairying (Noddle 1983: 99). Located off the east coast of Papa Westray is the Holm of Papa Westray, where a stalled cairn, Holm of Papa Westray North, is situated (Ritchie 1983: 59). This mortuary monument belongs to the Orkney-Cromarty grouping of chambered cairns (Davidson & Henshall 1989: 19) whose Orcadian distribution not only shares the same ceramic tradition in Unstan ware as that exhibited at Knap of Howar (Davidson & Henshall 1989: 88; Henshall 1985: 108-110; Ritchie 1983: 54), but replicates the ‘design of the houses’ (Ritchie 1983: 58) in that in each case ‘large upright slabs are used to subdivide the internal floor-area of a chamber which is essentially rectangular and approached by an entrance passage’ (Ritchie 1983: 58). These slabs are set transversely ‘into the side-walls ... of the ... chambers’ (Ritchie 1983: 58) and, as at Knap of Howar, low stone benches run between them (Davidson & Henshall 1989: 26). In the reduced sea-levels of the Neolithic the island would have formed a promontory of Papa Westray (Davidson & Henshall 1989: 11; Ritchie 1983: 59) and its marginal positioning relative to a ‘fertile agricultural



interior' (Ritchie 1983: 59) suggests the emergence of a spatially integrated landscape, whose forms of cultural expression reference the changing configuration of the natural and social worlds.

This spatial relation is also exhibited at Sanday, where the stalled cairn of Tres Ness is sited on a long, low-lying promontory 'joined to the main part of the island ... by a spit of sand' (Davidson & Henshall 1989: 163). Located on the far side of the island is the Neolithic settlement site of Pool, whose initial phase of occupation is dated to the 'early/mid fourth millennium BC' (Hunter 2007: 60). Whilst this site is 'roughly contemporary with Knap of Howar' (Hunter *et al.* 2007: 515), its 'structures were fundamentally distinct ... in ... size ... constructional method and ... layout' (Hunter 2007: 64) as surviving traces of walling indicate a series of 'cell-like features defined by single-faced ... walls ... with ... turf backing' (Hunter 2007: 63). Internally these structures were small – Structure 1 exhibiting a diameter of 2.5 metres, whilst Structure 2 had a two metre diameter and an entrance width of 0.5 metres (Hunter 2007: 31). Externally, they 'belonged to a complex ... set of buildings which ... may have been around 40m in diameter' (Hunter 2007: 63). However, rather than representing 'self-contained units' (Hunter 2007: 63), they are instead interpreted as the parts of a 'more elaborate system of structures' (Hunter 2007: 31) whose architectural indications of centralised settlement oppose the 'widely-held view' (Hunter 2007: 63), derived from Knap of Howar, that 'early settlement ... was ... dispersed ... reflecting units of a segmentary society' (Hunter 2007: 63-64).

Despite this difference in 'constructional character' (Hunter 2007: 64) the site does, however, exhibit links with Knap of Howar, both in terms of its shared association with Unstan ware (Hunter 2007: 28, 64) as well as in the way its subsistence practice 'followed an economy representative of ... Knap of Howar' (Hunter 2007: 64). As with Knap of Howar, faunal remains indicate the presence of a mixed livestock strategy centred upon recently domesticated cattle and sheep (Bond 2007: 213; Hunter 2007: 72) and the recovery of five calves 'considered to be one month old or less' (Bond 2007: 218) points to a 'non-intensive form' (Bond 2007: 224) of dairying in which 'cows were milked

and ... calves suckled until annual slaughter' (Hunter 2007: 72). Cultivation is also evidenced through the recovery of naked barley (Bond 2007: 183; Hunter 2007: 73) and the presence of a saddle quern (Hunter 2007: 31) suggests that the processing of cereal was also conducted on the site.

A shared cultivation practice is also evident for, in each case, the establishment of a primary midden is followed by a secondary layer whose formation is contemporary with that of its associated structures (Hunter 2007: 28; Ritchie 1983: 44). At Knap of Howar this secondary layer was 'spread out to a uniform thickness of some 0.35 m over an area of about 500 m<sup>2</sup>' (Ritchie 1985: 47) and the deliberate maintenance of a level surface suggests that this was a 'desirable end in itself, perhaps to allow small-scale intensive cultivation' (Ritchie 1983: 45). Supporting this understanding is the high magnetic susceptibility readings obtained from the midden deposits at Pool (Hunter 2007: 28). These deposits contained a mix of charcoal and burnt organic material whose carbonised remains of grass and heather (Hunter 2007: 22) indicate the utilisation of a high mineral 'soil-based fuel source of peaty or moorland turf' (Bond 2007: 198) which, once spent, was spread with the waste of domestic activity on existing layers of midden (Hunter 2007: 22). For Guttman, these ash middens provide the 'key elements necessary for plant growth' (Guttman 2005: 226) in that they contain the three macronutrients of nitrogen, phosphorus and potassium required by plants to offset the limiting factors placed on growth by soil condition (Guttman 2005: 226-227). However, rather than being added to the arable surface, soil micromorphology instead suggests that these spreads of midden were 'cultivated *in situ*' (Guttman 2005: 232) – and it is this practice of midden cultivation that is indicated at Pool through the recovery of barley amongst a plant assemblage that 'may ... have been introduced as a component of turf fuel' (Hunter 2007: 28), whilst, at Knap of Howar, it is the 'grains of cereal ... recovered from the midden' (Ritchie 1983: 53) that provides the 'evidence for arable agriculture' (Ritchie 1983: 53).

Although the fuel source at Knap of Howar could not be identified (Ritchie 1983: 57), the spreads of burning exhibited at Pool 'inferred ... a similar ... fuel source to that which formed the basis of later redder Neolithic levels' (Hunter 2007: 28).

Given the absence of a naturally occurring source of peat and timber (Hunter 2007: 22) and the high ash and mineral content of these spreads (Bond 2007: 198), the most probable fuel source was an organic rich peat substitute derived from the sediments of an impounded loch (Hunter 2007: 23). Both Pool and Knap of Howar were 'located next to ... impounded lochs' (Bond 2007: 170) which would 'not only provide water but also the potential for ... iron-rich peaty turf which could be exploited for fuel' (Dockrill 2007a: 394) consequent upon the climatic drying of their margins (Hunter 2007: 23). Indeed, this combination of 'fuel ... and ... fresh water' (Dockrill 2007b: 34) appears to have been a 'prerequisite for Neolithic settlement location' (Dockrill 2007b: 34) as this pattern is not only replicated at the later Neolithic sites of Skara Brae, Stove and Tofts Ness, but is also evidenced through the distribution of flint scatters on Mainland (Bond 2007: 170; Dockrill 2007a: 394).

The stability accorded to the subsistence economy by this 'association of ... settlement with a fresh water loch' (Dockrill 2007a: 394) is reflected in the 'distribution of chambered cairns and their apparent relationship with land areas' (Dockrill 2007b: 37). Indeed, regarding the concentration of these monuments on Rousay, Childe noted how the 'cairns ... stand on land now or recently cultivated, or on the border between arable and heath' (Childe 1942: 141), whilst their spatial proximity was interpreted by Renfrew as denoting the territorial claims of a socially segmented settlement structure (Renfrew 1973a: 146-149). This observed 'relationship between ... cairns and cultivatable areas' (Davidson & Henshall 1989: 15) is strengthened when the wider distribution of these monuments is considered, for whilst occupying sites that are 'visually impressive' (Fraser 1983: 301), these structures consistently demonstrate a locational preference for 'places with extensive areas of intermediate visibility' (Fraser 1983: 301), suggesting 'some close connection between each cairn and its immediate hinterland' (Fraser 1983: 301). For Fraser, the 'obvious connection is that the cairn-builders lived on, or used, the land within easy walking distance of the cairn' (Fraser 1983: 301) and it is this implied understanding of a spatially integrated landscape that is supported through the evidential frameworks of Pool and Knap of Howar and the indications these give for 'economically successful and stable settlements which

directly conflict with the models of a mobile society suggested ... for southern Britain' (Dockrill 2007b: 37).

Underpinning these models is the perceived absence of synchronicity in economic and cultural movement framing the appearance of domesticates as the 'management of cattle through seasonally-based use of different grazing areas, and a limited use of cereals' (Cooney 2003: 48) implies the retention of a subsistence strategy derived from the spatial practices of the Mesolithic. As a result, rather than indicating movement at the level of the economy, their presence is read culturally in terms of the way they symbolise the emergence of a new framework of cognitive meaning concerning the nature of the natural world and the relation it has with the social. Structuring this understanding is the movement to a detotalised reading of the Neolithic consequent upon the post-processual 'backlash against the ... economy, and its importance as a factor in the Mesolithic-Neolithic transition' (Schulting 2004: 22) for in breaking with the modernist conception of the 'Neolithic as a unitary phenomenon ... built around ... changes in subsistence practice' (Cooney 1997: 26), agriculture is seen as being 'no more fundamental than other aspects of ... material culture' (Rowley-Conwy 2004: 83). In opposition to modernist representations of the 'Neolithic as always being marked by permanent settlement and organised agriculture' (Cooney 1997: 26), its traces are instead separated from the economy as the 'apparent lack of evidence for substantial cereal production alongside the continued use of wild plant foods' (Cooney 1997: 25) renders them devoid of any inherent causality.

It is this separation of agriculture from the economy that is, however, underdetermined by the evidential base as the appearance of its elements also provides 'evidence for a strong economic shift in the ... transition to the Neolithic' (Schulting 2004: 22). It is this movement in the material configuration of the natural and social worlds that is conveyed through both the wider evidential framework as well as that relating to central southern England for rather than 'continuing a Mesolithic tradition of hunting and foraging' (Schulting 2004: 22), the inception of agriculture is instead indicative of a 'substantial change in the subsistence economy' (Schulting 2004: 22) such that rather than

being confined to the cultural, agriculture also had effectivity at the level of the economy.

It is this movement at the level of the economy that the landscape practices of the Neolithic articulate through the relations they establish with the natural world. Clearly these relations had symbolic meaning in terms of the understanding they gave to such practices but rather than resting upon the subsistence strategies of a seasonally nomadic settlement pattern, their forms of cultural expression were instead synchronised with their material translation. It is this synchronised reading of the economic and the cultural that the evidential base suggests for rather than informing an underlying assumption of continuity through the conflation of economic movement with its forms of modernist expression, the 'Neolithic was neither nomadic nor dependent ... on wild foods' (Rowley-Conwy 2004: 96). Instead, the:

“... various lines of evidence ... reveal a ... Neolithic that acquired the majority of its food from agriculture. Agricultural clearings were ... small and scattered but ... represented substantial infrastructural investment ... each ... contained ... cultivated fields ... mantle vegetation would have grown round the edge, providing nuts and fruits ... Cattle ... were intensively managed for dairy products ... and ... the ard ...supplemented ... agricultural production ...” (Rowley-Conwy 2004: 96)

### 3.3 Towards an integrated reading of the Neolithic.

Supporting this synchronised reading of the economic and the cultural is the stable isotopic evidence concerning a 'sudden and marked dietary shift ... with the onset of the Neolithic' (Richards *et al.* 2003: 366). Centred upon the analysis of stable isotopes in human bone collagen, the method provides a 'direct measure of past human diet' (Schulting & Richards 2002: 153) as the chemical constituents of collagen are directly derived from the 'protein sources in human diets' (Richards 2004: 86). As the isotopic composition of these sources 'varies consistently between different classes of food' (Smith & Brickley 2009: 113) and, given the 'slow turnover rate of collagen in adult humans'

(Schulting & Richards 2002: 155), it is consequently possible to reconstruct the 'diet of an individual during the final decade or so of ... life' (Smith & Brickley 2009: 113) by 'measuring ... bone collagen ... values' (Richards & Hedges 1999: 892) since these reflect the different categories of food from which 'dietary proteins are routed directly into bone collagen' (Richards & Schulting 2006: 451). In measuring the carbon content in collagen values, stable carbon isotopes are able to determine whether 'dietary protein came from marine or terrestrial sources' (Richards 2004: 86) for whilst 'human bone collagen  $\delta^{13}\text{C}$  values of -11 or -12‰ indicate a diet composed almost entirely (>95%) of marine protein ... values close to -20 or -21‰ indicate a mainly (>95%) terrestrial protein diet' (Richards & Hedges 1999: 892).

It is these contrasting isotopic signatures that are manifested through the coastal interface of a Mesolithic and Neolithic presence for whilst the eustatic submergence of the Holocene landscape in southern Britain constructs a 'gap of nearly two millennia between the latest dated Mesolithic human and the earliest Neolithic human remains' (Schulting & Richards 2002: 148), the Atlantic period coastline remains present in western Scotland. Here, skeletal fragments recovered from the late Mesolithic shell midden of Cnoc Coig, Oronsay, show a 'strong reliance on marine protein' (Schulting 2008: 93) through bone collagen  $\delta^{13}\text{C}$  values of 'near -12‰' (Schulting & Richards 2002: 162) and suggests a coastally-derived subsistence strategy centred upon the inshore hunting and fishing of seal and saithe, whose remains dominate the faunal assemblages associated with the midden (Schulting 2008: 91). Exhibiting a date range of 'c. 4300 to 3800 cal. BC' (Schulting & Richards 2002: 174), these fragments partially span the 'period that ... could be considered to be ... contemporary with the appearance of ... Neolithic elements' (Schulting & Richards 2002: 174). Yet, despite such temporal proximity, the continuing 'reliance ... on protein acquired from the sea' (Schulting & Richards 2002: 167) combined with their 'relatively isolated geographical position, strongly suggests that these were among the last individuals on the west coast of Scotland to follow a purely ... Mesolithic way of life' (Richards & Schulting 2006: 449).

This 'reliance on marine-derived protein' (Schulting & Richards 2002: 174) contrasts with the isotopic signatures emanating from a coastal Neolithic presence. Here, irrespective of context, the  $\delta^{13}\text{C}$  values in skeletal elements consistently demonstrate an 'isotopically homogeneous diet with minimal input of marine foods' (Schulting & Richards 2002: 157). Thus, at Raschoille Cave, Oban, skeletal remains dating to between 3940 and 3540 cal. BC (Schulting & Richards 2002: 164) indicate an 'entirely terrestrial diet' (Schulting & Richards 2002: 164) with  $\delta^{13}\text{C}$  values averaging  $-20.6\text{‰}$  (Schulting & Richards 2002: 164), whilst at the shell midden site of Carding Mill Bay, Oban, the earliest skeletal remains exhibit a date range of '3700-3520 cal. BC' (Schulting & Richards 2002: 161) and show 'no use of marine protein' (Schulting & Richards 2002: 155) through  $\delta^{13}\text{C}$  values of  $-21\text{‰}$  (Schulting & Richards 2002: 160). Similarly, at Crarae, Loch Fyne, skeletal fragments recovered from the chamber of a Clyde cairn give a date range of '3640-3380 cal. BC' (Schulting & Richards 2002: 161) and  $\delta^{13}\text{C}$  results of  $-21.3\text{‰}$  (Schulting & Richards 2002: 160) show 'no contribution of marine protein in the diet of these individuals' (Schulting & Richards 2002: 155).

This movement in  $\delta^{13}\text{C}$  values is also indicated through the evidential framework of southern Wales. Here, sited within two kilometres of the Gower coast, is the Cotswold-Severn chambered long barrow of Parc le Breos Cwm. Dating to between 3800 and 3500 BC (Cummings & Whittle 2004: 58), isotopic measurement of skeletal remains recovered from the chambers of the monument reveal an average  $\delta^{13}\text{C}$  value of ' $-20.5\pm 1.0\text{‰}$ ' (Darvill 2004: 162) and contrasts sharply with 'values of around  $-14\pm 1.0\text{‰}$  obtained from bone taken from fifth- and sixth-millennia BC coastal sites in the same area' (Darvill 2004: 163). Similar 'values have been obtained from samples taken from Hazleton North, Ascott-under-Wychwood ... Millbarrow ... West Kennet and Lambourn' (Darvill 2004: 162-163) long barrows such that, irrespective of location, there are no 'isotopic signals indicative of any significant consumption of marine foods' (Richards & Schulting 2006: 447) following the appearance of Neolithic elements as 'all ...  $\delta^{13}\text{C}$  values are close to  $-20\text{‰}$ ' (Richards & Hedges 1999: 893).

For Thomas, rather than indicating movement at the level of the economy, this 'rejection of marine foods' (Thomas 2003: 70) is read culturally for whilst 'stable isotopes can distinguish between diets based on ... marine and terrestrial sources' (Thomas 2003: 69), they cannot 'distinguish between wild and domesticated resources' (Thomas 2003: 69). As a result, rather than implying the 'sudden inception of a Neolithic ... agriculture' (Thomas 2003: 71), the 'abandonment of marine foods' (Thomas 2008: 73) does not necessarily support the accompanying 'notion of a uniform and abrupt shift to dependence on domesticates' (Thomas 2003: 70) as its corollary for whilst the 'archaeobotanical evidence indicates that ... cereal crops were grown in many parts of Britain, wild species were still extensively gathered in most areas' (Thomas 2003: 71). As a result, rather than signalling the 'universal adoption of a way of life based exclusively on domesticated plants and animals' (Thomas 2008: 74), the 'drift away from shoreline resources' (Thomas 2003: 70) is instead seen as reflecting the 'introduction of a new series of food taboos' (Thomas 2008: 73) through which new forms of 'cultural identification ... being Neolithic' (Thomas 2003: 70) are constructed within the underlying framework of a Mesolithic subsistence economy.

Supporting this cultural reading of the isotopic evidence is the pattern of dental attrition exhibited through the skeletal assemblage at the Whitwell Quarry long cairn, Derbyshire. Spanning a date range of 4360-3720 cal BC (Schulting 2000: 30), the assemblage provides the 'earliest British dates on short-lived materials from an impeccable Neolithic context' (Schulting 2000: 30) and whilst 'stable carbon isotope ... values indicate no contribution of marine protein in the diet of these individuals' (Schulting 2000: 30), the 'relatively flat angle of ... occlusal wear ... suggests that the diet consumed ... included a high proportion of tough fibrous food' (Chamberlain & Witkin 2003: 55). These 'tough fibrous plant materials' (Smith & Brickley 2009: 118) are 'often encountered on Neolithic sites in Britain, and ... include a broad range of tree and shrub fruits together with roots and tubers' (Chamberlain & Witkin 2003: 58) which, if 'consumed in significant quantities' (Chamberlain & Witkin 2003: 58), would 'result in dental wear patterns similar to those observed in the Whitwell Quarry sample' (Chamberlain & Witkin 2003: 58) – whose pattern of 'occlusal wear ...



indicates ... masticatory loads ... comparable with those seen in populations which depend on foraging' (Chamberlain & Witkin 2003: 57).

This understanding of the isotopic evidence is, however, open to contestation for whilst the presence of wild resources can support a reading of continuity at the level of the economy, the distinctions it makes between the tame and the wild may 'not ... be so straightforward' (Schulting 2008: 94) as these sources of dietary protein can also express the anthropogenic effects of woodland clearance. As a result, rather than being considered 'fully wild ... foods' (Schulting 2008: 94), the continuing presence of these resources does not necessarily support the 'current orthodoxy of a gradual dietary transition' (Richards & Schulting 2006: 444) with 'substantial elements of a ... Mesolithic subsistence economy persisting well into the fourth millennium BC' (Schulting & Richards 2002: 177). Instead, their presence can equally reflect the 'rapid nature of subsistence change across the Mesolithic-Neolithic transition' (Schulting & Richards 2002: 148) consequent upon the 'switch to agriculture as the dominant mode of food production' (Bonsall *et al.* 2002: 12-13).

Indeed, it is this movement in subsistence practice that is conveyed through the evidential framework for whilst the 'faunal evidence demonstrates an overwhelming reliance on domesticated species, particularly cattle' (Richards & Schulting 2006: 446) in 'southern Britain and Ireland ... from the very earliest Neolithic' (Schulting & Richards 2002: 149), the 'same dominance of domestic fauna' (Richards & Schulting 2006: 447) also characterise the 'far north ... settlements of ... Orkney' (Schulting 2008: 95). Similarly, whilst 'radiocarbon dates on charred cereals suggest that the onset of crop cultivation in Britain and Ireland occurred no earlier than c. 3950 cal BC' (Brown 2007: 1050), the 'first direct evidence of cultivation in the form of carbonized cereal grains is found from c. 3700 cal BC at sites in eastern and northern Scotland' (Bonsall *et al.* 2002: 12). Coupled to the isotopic evidence concerning the 'near-total avoidance of sea-foods, from Devon to northern Scotland' (Schulting 2004: 23), both the archaeobotanical and archaeofaunal evidence consequently suggest that the inception of agriculture was accompanied by a 'major shift in subsistence patterns' (Bonsall *et al.* 2002: 12) and indicates a 'rapid ... process

of neolithization' (Schulting & Richards 2002: 177) whose near synchronous spread 'strongly challenges the currently dominant perspective of economic continuity' (Schulting & Richards 2002: 178).

This has implications for that separation of the economic and the cultural framing 'current archaeological thought on the nature of the ... transition' (Richards & Schulting 2006: 453) as the 'apparent speed and completeness' (Schulting & Richards 2002: 174) of this 'shift in the subsistence economy' (Schulting & Richards 2002: 174) raises the 'possibility that neolithization ... occurred through colonization at some level' (Schulting & Richards 2002: 177). Supporting this possibility is not only the 'sudden ubiquity of Neolithic material culture in Britain after 4000 BC' (Thomas 2008: 65), but the 'total disappearance of Mesolithic assemblages' (Thomas 2008: 65) from the archaeological record. However, rather than indicating the transformative effects of an exogenous demographic movement, this change in material culture is instead seen by Thomas as representing movement beyond the cognitive frameworks of the Mesolithic consequent upon the 'indigenous ... adoption of a Neolithic way of life' (Thomas 2008: 65) as the 'revelation that the Neolithic appears to have been introduced to the whole of Britain virtually instantaneously ... makes it ... difficult to sustain ... explanations based on population movement or economic change' (Thomas 2003: 68) since 'any argument involving the arrival ... of a ... Neolithic population has to explain what became of the native ... Mesolithic' (Thomas 2008: 62).

It is this, however, that the archaeological record is unable to resolve for, at present, there are no stratified contexts spanning the crucial period of overlap at the point of transition (Schulting 2000: 32). As a result, any understanding of the interface between the Mesolithic and the Neolithic is ultimately dependent upon the nature of the evidence available and the way it is constructed and read. For Thomas, such understanding is derived through an underlying assumption of continuity for in opposition to the overwhelming of an 'indigenous population ... by an incoming ... economic system' (Thomas 2008: 62), it is 'hard to see how the arrival of small groups of agricultural colonists' (Thomas 2008: 65) could have either slaughtered or decimated the 'entire Mesolithic

population quickly enough for them to have vanished entirely from the archaeological record' (Thomas 2008: 65). Rather than representing the 'replacement of one ... population by another' (Thomas 2003: 68), the 'apparent swiftness of the change from Mesolithic to Neolithic material culture' (Thomas 2008: 63) must consequently reflect the active engagement of the indigenous population (Thomas 2003: 69), whose assimilation of Neolithic elements explains the evidential indicators for convergence with an 'existing way of life' (Thomas 2008: 58) in the landscapes of the transition – as conveyed through the presence of 'leaf-shaped arrowheads among Mesolithic flint scatters' (Thomas 2008: 67), the siting of 'Neolithic funerary monuments ... in places that had been occupied during the Mesolithic' (Thomas 2008: 67) and the deposition of 'marine shells in and around the chambers of ... megalithic tombs' (Thomas 2003: 70).

These indicators of 'continuity in the landscape' (Thomas 2008: 67) and the understanding they give of the transition are, however, open to qualification as the evidential base is also indicative of a 'sharp disjunction between the Mesolithic ... and the Neolithic' (Schulting 2004: 22). It is this evidence of disjuncture that is conveyed through the presence of a rectilinear timber architecture, whose angular form and constructional technique exhibits 'no earlier indigenous tradition in Britain or Ireland' (Barclay *et al.* 2002: 127) from which these structures could emanate. Instead, the absence of any evidence regarding failure in the 'construction or ... layout' (Brophy 2007: 92) of these structures suggests the advent of a 'fully formed tradition of building' (Brophy 2007: 92) whose 'specialised skills of joinery' (Cross 2003: 196) not only expresses 'similarities with continental architecture' (Fairweather & Ralston 1993: 321), but implies a different understanding of the natural world consequent upon the 'substantial quantities of hard wood' (Cross 2003: 196) required for their construction.

Indeed, this movement in the understanding of the natural world is not confined to the presence of these structures as the same constructional skills in 'timber jointing' (Brophy 2007: 94) are also found in the preserved trackways of the Somerset Levels. Here, a timber trackway – the Sweet Track – covering 'some

2 km of periodically wet fen' (Whittle 1996: 235) runs from the 'Poldens Ridge out to Westhay Island in the middle of the Levels' (Whittle 1996: 235). The trackway itself comprised a 'single walkway ... of ... planks ... raised above a substructure of rails and diagonal cross-pegs' (Whittle 1996: 235) and the estimated '6,000 pegs, 2,000m of rails and 400m of planking' (Bewley 2003: 48) required for its construction were sourced from a combination of 'primary ... and secondary woodland' (Whittle 1996: 235). Dendrochronological dating of its worked timber to '3806/7 BC' (Bewley 2003: 48) suggests anthropogenic intervention in the landscape as 'early as 4000 bc' (Whittle 1996: 235) and is supported through the preserved remains of a preceeding trackway – the Post Track, constructed 'some thirty years earlier' (Whittle 1996: 235) to the main Sweet Track.

It is the 'constructional similarities' (Brophy 2007: 92) exhibited through the emergence of this building tradition with 'continental European practices' (Fairweather & Ralston 1993: 321) that explains the siting of these structures along potential routes of Neolithic movement, for, whilst in Ireland its architectural forms are often located 'near ... the coast' (Bradley 2007: 40), in lowland Scotland, they tend to be positioned 'beside major rivers flowing into the North Sea' (Barclay *et al.* 2002: 129). Indeed, regarding lowland Scotland, the long axis of these structures tend to lie 'parallel to the general trend of the river' (Brophy 2007: 92-94) such that, as with the central European longhouse, their orientation appears to invoke an understanding of 'colonial ancestry' (Brophy 2007: 94). Supporting this cultural referencing of a common origin are the 'apparent similarities' (Barclay *et al.* 2002: 129) in 'burial structures along the eastern seaboard' (Barclay *et al.* 2002: 127) and the way their distribution implies movement 'up the North Sea coast of Britain, between estuaries like those of the Humber and the Tees and the drowned valleys ... along the Scottish shoreline' (Bradley 2007: 20), whose east-flowing rivers, in turn, provided access to the interior.

The same understanding concerns the presence of Neolithic elements along the western seaboard. Here, not only are 'similar monument forms ... shared between western Scotland and Northern Ireland' (Schulting 2004: 25), but the

presence of 'portal dolmens ... in both western Britain and Ireland' (Thomas 2003: 69) suggests northward movement of the Neolithic via the 'marine highways' (Davies 1946: 38) of the Irish Sea. Informing this maritime reading is the pattern of tidal circulation characterising the Irish Sea basin, whose coastal configuration causes those tidal streams entering the basin through the southern and northern gateways of the St. George's and North Channels to converge on the Isle of Man (Bradley 2007: 20; Noble 2006: 29; Cooney 2004: 147; Davies 1946: 42). Within this north-south movement, not only would the peak of Snaefell render the Isle of Man a 'highly visible place from the sea' (Noble 2006: 29), but navigation to it would have been facilitated by the distinctive peaks of the Mourne and Wicklow Mountains, Snowdonia and the Lake District Fells (Cooney 2004: 149; Davies 1946: 42-44) which, under optimum conditions, could have been 'identified ... from a distance of ninety kilometres' (Bradley 2007: 20). From here, movement through the North Channel would have made navigation to the Western and Northern Isles possible by 'following the coasts of Tiree, Coll, Rhum' (Burl 2000: 94) before 'passing through the Sound of Barra and northwards along the Atlantic shores of the Uists ... Harris and Lewis' (Burl 2000: 94).

Supporting this maritime understanding are not only the similarities in ground-plan exhibited through the paired rectilinear structures of Tankardstown, Eilean Domhnuill and Knap of Howar (Armit 1996: 50; Barclay 1996: 70), but the tendency for the mortuary monuments of the Irish Sea basin to be located in its upland regions (Cummings 2009: 139-140; 2004: 29). These regions not only share visibility with each other, but are intervisible with the Isle of Man (Cummings 2009: 143; 2004: 30; Cummings & Fowler 2004: 116), whose centrality in the sea-routes of the basin explains the presence of mortuary structures comparable in form to those of its surrounding coasts for whilst both 'Cashtel yn Ard and King Orry's Graves can be paralleled with court cairns in Ireland and south-west Scotland ... the first-phase box-like structure at King Orry's Grave SW is similar to those found on Anglesey, such as Trefignath, and Clyde monuments in south-west Scotland such as Mid Gleniron I' (Cummings 2004: 30). It is these wider patterns of movement that are referenced through the landscape settings of these monuments as their positioning 'between the

mountains and the sea' (Cummings & Fowler 2004: 118) not only articulates the emergence of a shared framework of cultural understanding concerning the spatially integrated nature of the Irish Sea basin and the connective role of the sea within it, but constructs a foundational narrative of 'beginnings and the arrival of new ... material culture' (Cummings 2002a: 142) through the tendency these structures have to 'face the sea' (Schulting 2004: 26) and the links it establishes with 'far-away places and people' (Cummings 2002a: 142).

However, rather than reading these narratives culturally in terms of the way they reference the assimilation of Neolithic elements through indigenous contact with its continental presence (Thomas 2008: 64-65), both the insular character of the late Mesolithic coupled to the fact that the 'main domesticated species were introduced to the British Isles from ... across the Channel' (Thomas 2003: 69) suggests that the impetus behind these coastal movements was exogenous in origin as 'domesticated resources had ... been present in northern France and the Low Countries for a ... long time before they were adopted in Britain' (Thomas 2003: 68). Explaining this delay in the northward advance of the Neolithic is the palaeoclimatic evidence concerning the advent of a 'prolonged period of relatively dry climatic conditions that began c. 4100 cal BC' (Bonsall *et al.* 2002: 14) in the 'cooler, maritime regions of north-west Europe' (Bonsall *et al.* 2002: 11). It is this 'shift towards a drier, more continental climatic regime' (Bonsall *et al.* 2002: 18) that rendered the 'slowly permeable subsoils' (Bonsall *et al.* 2002: 18) of Britain and Ireland open to agriculture as the combined effects of 'lower winter precipitation and ... higher summer temperatures' (Bonsall *et al.* 2002: 16) not only extended the length of the growing season by reducing the 'tendency to seasonal waterlogging' (Bonsall *et al.* 2002: 16) in their glacially derived soils, but improved their workability for 'when at or near saturation many soils are unsuitable for cultivation because stickiness, plasticity and high shear strength hamper tillage and prevent development of a good tilth for seedbed preparation' (Bonsall *et al.* 2002: 16).

As well as rendering such soils viable to agriculture, this 'change in climatic conditions' (Bonsall *et al.* 2002: 17) was furthered by the nature of Neolithic clearance activity itself as the cultivation of crops at 'low intensity ... in a

predominantly wooded environment' (Dark & Gent 2001: 75) would have restricted the capacity for any 'localized outbreaks of disease ... to ... spread between clearings surrounded by forest' (Dark & Gent 2001: 73). Indeed, crops themselves would have been 'relatively resistant to fungal infection and insect predation' (Dark & Gent 2001: 73) as native forms of pathogens and predators would not yet have been 'adapted to attack cereals ... in this environment' (Dark & Gent 2001: 59) such that their introduction, combined with 'optimal climatic and soil conditions' (Brown 2007: 1050), would have resulted in a 'honeymoon period for ... cultivation ... characterised by initially high crop yields' (Brown 2007: 1050) prior to the subsequent 'catch up ... of species which will evolve into pests and diseases of that crop' (Dark & Gent 2001: 71).

In establishing the conditions for the further 'spread of agriculture ... into ... the British Isles' (Bonsall *et al.* 2002: 17), the palaeoclimatic evidence consequently suggests that the 'incentive for expansion' (Bradley 2007: 36) was essentially exogenous in character as the climatic drying of soils previously 'marginal for agriculture' (Bonsall *et al.* 2002: 17) made it possible to 'practice the same economy over a more extensive territory' (Bradley 2007: 36). It is this expansion in the 'geographical limit of its viability' (Bonsall *et al.* 2002: 17) that the stable isotopic evidence concerning a 'rapid and significant shift in diet across the Mesolithic-Neolithic transition' (Richards & Schulting 2006: 445) articulates for 'once domestic plants and animals became available, they appear to have completely transformed the economy at a remarkably rapid pace' (Schulting & Richards 2002: 177) such that rather than informing an underlying assumption of continuity, the evidential base can instead be seen to support 'elements of a previous orthodoxy, which saw the advent of the Neolithic as a revolution' (Richards & Schulting 2006: 444-445).

This has implications for the current framing of the 'transition in terms of ... a cognitive shift and the construction of ... new identity' (Schulting & Richards 2002: 177) for rather than supporting a desynchronised reading of the economic and the cultural, the 'evidence ... suggests that these strands were far more tightly interwoven' (Schulting & Richards 2002: 177). As a result the emphasis currently accorded to the symbolic effects of an agricultural presence 'no longer

further ... understanding of the ... Neolithic' (Schulting 2004: 26) as the primacy it accords to the cultural necessarily forecloses 'any attempt to more closely integrate these two aspects of social life' (Schulting 2004: 23). Underpinning this closure is the association that such an approach holds with the totalising frameworks of modernist knowledge and the way these position the Neolithic within the broader metanarratives of Enlightenment historiography through the underlying causality they ascribe to the economy. However, this advocacy for an integrated reading of the evidential base does not imply a return to modernist conceptions of the Neolithic as a structured totality whose overall coherence is given at the level of the economy. Instead, it is to advance an understanding of the transition as an interrelated movement beyond the economic and cultural frameworks of the Mesolithic. It is this synchronised reading that the evidential frameworks of the British and Irish Neolithic articulate and, through its theoretical recovery, the conditions are established for not only capturing the 'workings of ... the Neolithic' (Schulting 2004: 26) in terms of its underlying dynamics but, in so doing, contextualises the experiential frameworks that currently dominate understanding of its lived existence.



## **Chapter 4. Ancestry and the changing dynamics of the Neolithic.**

### **4.1 Ancestry, monumentality and the emergence of agriculture.**

It is this integrated reading of the evidential base that the mortuary architecture of the early Neolithic demonstrates for rather than 'floating timelessly' (Whittle *et al.* 2007a: 131) within an underlying framework of economic continuity, the radiocarbon dates 'available ... from England, Wales and Scotland follow a remarkably similar pattern' (Schulting & Whittle 2003: 74) in that the 'majority ... fall in the range 3500-3800 cal BC' (Schulting & Whittle 2003: 74). This suggests that the 'initiation of an interest in the collective remains of the dead and ... their monumental commemoration did not belong to the context of the Mesolithic-Neolithic transition itself' (Whittle *et al.* 2007a: 127), but was instead 'something that developed after the Neolithic had begun' (Whittle *et al.* 2007a: 127) such that the 'construction and initial use of chambered tombs ... are a component of the relatively early stages of the Neolithic in Britain' (Schulting & Whittle 2003: 74). This necessarily opposes the current understanding of these structures as 'instrumental in the formation ... of the Neolithic' (Thomas 2008: 78) for rather than representing 'instruments of conversion' (Sherratt 1995), this 'apparent horizon of chambered tomb construction' (Schulting & Whittle 2003: 74) suggests that the dead only acquired significance following the inception of an agricultural presence. As a result, rather than interpellating the Mesolithic with new forms of subjectivity, the chronological frameworks of these structures can instead be read in terms of the way they articulate the structuring of the Neolithic on an emergent dynamic of ancestry whose forms of cultural expression reflect the changing configuration of the natural and social worlds at the level of the economy.

Supporting this chronological reading is the evidence these structures give for multi-phase construction for in 'nearly every tradition of megalithic architecture across the British Isles' (Noble 2006: 127) a developmental sequence is exhibited through which 'simple chambers in small round cairns' (Schulting & Whittle 2003: 76) are 'rapidly modified and subsumed within more elaborate monuments' (Noble 2006: 128). Regarding the Cotswold-Severn tradition of chambered long barrows, this movement is referenced through the architectural

elaboration and enlargement of small circular structures with 'long cairns, façades and additional chambers' (Noble 2006: 126). Thus, at Wayland's Smithy, Oxfordshire, a small oval barrow '14m long and 7m wide' (Darvill 2004: 53) enclosing a timbered mortuary structure was subsequently sealed within a trapezoidal long cairn '67m long by 14m wide' (Darvill 2004: 69). This mound replicated the north-south alignment of the previous structure and set into its proximal end was a transepted stone-built chamber accessed by means of a narrow orthostatic passage whose entrance was set within a megalithic façade of six large sarsen stones (Whittle *et al.* 2007b: 104-105; Darvill 2004: 121; Whittle 1991: 61; Corcoran 1972: 38-39; Corcoran 1969: 54). Similarly, at Notgrove, Gloucestershire, a 7 metre circular rotunda containing a closed polygonal cist was subsequently enclosed within the mound of a terminally transepted long barrow measuring 40 metres by 14.5 metres (Scarre 2007: 81; Smith & Brickley 2006: 343; Darvill 2004: 68; Corcoran 1969: 54), whilst at Sale's Lot, Gloucestershire, an existing 5 metre rotunda grave was subsequently linked with an adjacent 12 metre simple passage grave to form a 35 metre long mound with forecourt and chamber (Smith & Brickley 2006: 345-346; Darvill 2004: 61, 68).

West of the Severn a similar sequence is exhibited at Ty Isaf, Brecknockshire. Here, a simple passage grave some 11 metres in diameter (Darvill 2004: 59) was subsequently incorporated into a laterally chambered long barrow 30 metres in length by 17 metres wide (Darvill 2004: 68; Cummings & Whittle 2004: 59; Corcoran 1969: 63-65). Likewise at Pipton, Brecknockshire, the presence of an 'internal chamber associated with a curving wall' (Darvill 2004: 60) suggests the sealing of a pre-existent oval structure within the enclosing mound of a laterally chambered long barrow (Darvill 2004: 70; Corcoran 1969: 65-66), whilst at Penywylod, Brecknockshire, a 10 metre circular structure containing a central cist (Darvill 2004: 61) was converted into a laterally chambered long barrow 20 metres in length through the addition of a tail (Darvill 2004: 68; Corcoran 1972: 61; 1969: 43).

This change in architectural form is also exhibited through the coastal distribution of portal dolmens surrounding the Irish Sea basin. Thus, at Pentre

Ifan, Pembrokeshire, a portal dolmen set at the southern end of a short, square cairn was subsequently modified through the addition of an orthostatic façade and the lengthening of its mound (Lynch 1972: 74-75), whilst at Dyffryn Ardudwy, Merionethshire, a portal dolmen set in a small oval cairn was subsequently extended through the construction of a second, larger chamber to its east – whose accompanying long cairn enclosed the entire structure (Cummings & Whittle 2004: 43; Corcoran 1972: 38; Lynch 1969: 134-136). Evidence of multi-phase construction is also present amongst the mortuary structures of Anglesey. Thus, at Trefignath, a box-like chamber set within a small round mound was subsequently enlarged through the addition of a second chamber to its east – causing the cairn to assume a long, wedge-shaped form. Following this initial modification, a further chamber was constructed in the forecourt of the second chamber such that the cairn was again lengthened in order to incorporate this additional structure (Cummings & Whittle 2004: 42). A similar sequence is indicated at Din Dryfol – where a number of chambers are set within a long cairn fronted by a monumental façade (Cummings & Whittle 2004: 42).

This subsumption of small circular structures within 'larger ... rectangular or trapezoidal mounds' (Darvill 2004: 70) is also evidenced through the Clyde cairns of south-west Scotland. Here, at Mid Gleniron I, Wigtownshire, two 5 metre sub-rectangular cairns – set in a line with their chambers aligned in the same direction – were subsequently modified to form a trapezoidal long cairn. Whilst the mound of this secondary structure sealed the initial southern chamber, the northern chamber was extended and embellished with a forecourt defined by an 8 metre semi-circular façade of large standing stones. An additional lateral chamber was also set on its western side between these primary features (Noble: 2006: 105; 2005: 27; Schulting & Whittle 2003: 75; Corcoran 1972: 35-36; Scott 1969: 212). A similar sequence is exhibited at Mid Gleniron II. Here, two circular structures containing small, closed chambers were subsequently converted into a trapezoidal long cairn. Whilst the mound enclosing this secondary structure resulted in the sealing of one chamber, the other was enlarged and set within a shallow orthostatic façade (Noble 2006: 105-111; 2005: 27-28; Corcoran 1972: 36). Likewise, at

Cairnholy I, Galloway, a simple mortuary chamber enclosed within a small circular structure was subsequently extended and set within the orthostatic façade of a trapezoidal long cairn 43 metres in length (Scarre 2007: 31; Noble 2006: 112-113; 2005: 28-30; Scott 1969: 193-195) whilst, at Cairnholy II, a small primary chamber was similarly extended and set within the enclosing mound of a trapezoidal long cairn (Noble 2006: 113; 2005: 30; Scott 193-194).

Similar sequences also characterise the architectural forms of the Hebridean passage grave tradition. Thus, at Achnacreebeag, Argyll, an 18 metre circular structure containing a closed central cist was subsequently extended on its south-eastern side to form a pear-shaped mound into which a polygonally chambered passage grave was inserted (Scarre 2007: 34-35; Noble 2006: 114; Corcoran 1972: 36-38), whilst at Craonaval, North Uist, a closed square cist was positioned within the centre of a circular mound whose eastern side was subsequently embellished with a larger accessible chamber (Noble 2006: 124). Indeed, throughout this tradition, the funnel-shaped approach to the short passage connecting the chamber may itself have been derived from the subsequent enlargement of the cairn whose indented forecourts obviated against the need to further extend the passage of the chamber – as indicated at Oban nam Fiadh, where the presence of an inner kerb relates to the opening of the passage rather than delimiting the exterior edge of the cairn (Noble 2006: 124).

Similar structural changes also define the Orkney-Cromarty tradition. Thus, at Tulloch of Assery A, Caithness, a circular cairn enclosing a south-facing passage grave with bipartite chamber was subsequently enlarged through the addition of a matching chamber to the north. The end-stone of this second chamber was set 4 metres apart from that of the southern structure and suggests that the 'northern chamber was built close to the edge of the earlier cairn' (Corcoran 1972: 34) – whose northern core would have provided internal support for its corbelled roofing. These chambers were then enclosed within a rectangular cairn 18.4 metres long and 13.7 metres wide with projecting horns 7.6 metres long at each corner. These horns defined a crescentic forecourt that, in the north, was 24.6 metres wide and set into the centre of each façade

was a pair of portal stones marking the entrance to each passage (Scarre 2007: 56; Noble 2006: 119; Davidson & Henshall 1991: 157; Corcoran 1972: 34). Similarly, at Tulloch of Assery B, a tripartite chambered passage grave positioned within the south-eastern quadrant of a 29 metre circular cairn suggests that the structure was initially enclosed within a smaller mound that was subsequently enlarged on its northern and western sides (Scarre 2007: 55-56; Davidson & Henshall 1991: 41, 56). Multi-phase construction is also indicated at Tulach an t'Sionnaich. Here, a 10.6 metre circular mound enclosing a simple passage grave was subsequently subsumed within a heel-shaped cairn – 16 metres long by 12 metres wide – whose straight edge was itself extended to form a 15.5 metre wide façade at its southern end. This initial modification was then followed by the addition of a 38.7 metre rectangular tail to the northern side of this D-shaped structure such that, in its final phase, the monument assumed the form of a long cairn 62 metres in length into which a single chamber was set at its broader, southern end (Scarre 2007: 56-57; Noble 2006: 119; Davidson & Henshall 1991: 9, 39, 41-42, 146-148; Corcoran 1972: 32-34). Likewise, at Camster Long, two south-east facing passage graves enclosed within 7.5 and 9 metre circular mounds (Davidson & Henshall 1991: 39) were incorporated into a trapezoidal long cairn 59.44 metres long (Masters 1997: 126). From its north-eastern and south-western corners projecting horns formed two shallow forecourts which, at the proximal end, was 16.5 metres wide (Masters 1997: 149), fronted by an unbroken dry-stone façade whose curved rise mirrored the lateral profile of the cairn (Masters 1997: 150; Davidson & Henshall 1991: 97). Within this enlarged structure, access to the existing chambers was maintained through the southward extension of their connecting passages. In the northern chamber this modification is indicated through the changing alignment of the passage 5.18 metres in from the entrance – where the presence of two portal stones ‘set at an angle of about 40° to the line of the outer passage ... mark the boundary between the original passage of the round cairn, and the extension of the passage ... to the edge of the later long cairn’ (Masters 1997: 136) whilst, for the southern chamber, it is conveyed through the changing form of the passage roofing for whilst the ‘inner part of the passage ... is lintelled ... the outer 1.5m, from the butt joints to the inner long cairn revetment was ... arched by overlapping stones’ (Masters 1997: 179).

Across the Pentland Firth, multi-phase construction is also evidenced through the stalled cairns of the Orcadian Neolithic. Thus, at Holm of Papa Westray North, Holm of Papa Westray, a stalled chamber '4.8 m long ... divided into four compartments by pairs of upright slabs' (Davidson & Henshall 1989: 120) was set in a rectangular cairn 11.8 metres long. However, rather than possessing a back-slab, the rear wall of the chamber instead comprised the frontal facing of an earlier structure that was 'clearly distinguishable ... as an unbonded joint with the side-walls of the ... chamber' (Davidson & Henshall 1989: 120). This facing continued into the body of the cairn and enclosed a small square cell that was subsequently 'sealed with ... drystone walling' (Davidson & Henshall 1989: 120) following the structural integration of its entrance with the later chamber (Davidson & Henshall 1989: 24). Similarly, at Calf of Eday Long, Calf of Eday, a stalled chamber '7 m long ... divided by three pairs of transverse slabs into four compartments' (Davidson & Henshall 1989: 107) was set into the eastern end of a rectangular cairn 20 metres long. Located behind this structure and occupying most of the western part of the cairn was a small bipartite chamber 'surrounded by a narrow core of cairn material which ... was distinguishable from the material of the rectangular cairn' (Davidson & Henshall 1989: 32). This core was irregular in shape and the absence of an external wall-face suggests that the chamber was initially enclosed within a circular cairn that was subsequently reduced in size when incorporated into the later rectangular structure, whose outer casing 'completely masked the entrance to the earlier chamber' (Davidson & Henshall 1989: 32).

Indeed, throughout this evidential framework a development sequence is exhibited through which 'simple bi or tripartite chambers set in small round cairns' (Noble 2006: 117-118) are subsequently 'elaborated ... to form ... stalled cairns that consist of four or more compartments ... set within large rectangular cairns' (Noble 2006: 118). Culminating this sequence are the 'massively enlarged versions' (Noble 2006: 118) located along the southern side of Rousay. Here, at Knowe of Ramsay, a stalled chamber '26.8 m long ... divided ... into fourteen compartments' (Davidson & Henshall 1989: 136) was set in a narrow rectangular cairn 31.4 metres long, whilst, at Knowe of Rowiegar, a stalled chamber 'about 22.2 m long with twelve compartments' (Davidson &

Henshall 1989: 137) was set in a rectangular cairn 27.4 metres long. Similarly, at Midhowe, a stalled chamber '23.4 m long ... divided by pairs of transverse upright slabs into twelve compartments' (Davidson & Henshall 1989: 147) was set in a rectangular cairn 32.5 metres long. However, rather than representing unitary constructions, these structures may instead have been the 'result of a series of enlargements' (Noble 2006: 117). This is suggested at Knowe of Ramsay, where vertical 'joints in the outer wall-face almost align with a pair of transverse slabs ... set closer than any other pair in the chamber' (Davidson & Henshall 1989: 25) – indicating two potential phases of construction in which the 'four outer compartments may be an addition to the ten inner compartments' (Davidson & Henshall 1989: 25), whilst, at Midhowe, the 'varying heights of the transverse slabs, their spacing and the alignment of the chamber walls ... suggest the chamber consists of three segments, the first of five compartments, the next of four and the last of three' (Davidson & Henshall 1989: 25).

For Barrett, underpinning these sequences is the changing relation of the living to the dead consequent upon the movement from funerary rites to rites of ancestry for whilst funerary rites separate the dead from the living, ancestral rites establish the presence of the dead in 'rites concerned with the living' (Barrett 1999: 397). It is this 'veneration of the ancestors and the active employment of their remains ... in ritual by the living' (Cooney 2000: 89-90) that explains the changing 'architectural form of ... these monuments' (Barrett 1999: 409) for in opposition to the interment of intact corpses in 'small simple structures' (Darvill 2004: 70), the final phase of these monuments instead 'provided ... access to ... internal structures able to accommodate multiple burials' (Darvill 2004: 70). It is this practice of collective burial that is conveyed through the skeletal assemblages associated with these structures as the 'enlargement of existing chambers and the addition of new chambers' (Noble 2006: 133) not only increased the capacity of these monuments, but allowed the manipulation and sorting of remains 'according to age, sex or body parts' (Bradley 1998a: 53).

Thus, within the West Kennet long barrow, Wiltshire, spatial variation in the age and sex composition of the skeletal assemblage is indicated through the

differentiated use of its transepted chambers for whilst the terminal western chamber comprised the remains of adult males, the laterally opposed inner southwest and northwest chambers contained balanced ratios of adult males and females. This contrasts with the profiles of the two laterally opposed outer chambers positioned closest to the entrance for whilst the southeast chamber was dominated by the remains of juveniles, the highest proportion of remains associated with the elderly were located in the northeast chamber (Thomas & Whittle 1986: 133; Wells 1962: 79-80; Piggott 1962: 24-26; 1958: 238). Similarly, at Torlin and Clachaig, Arran, evidence of sorting is indicated through the longitudinal placement of long bones along the side-walls of the chamber together with the positioning of skulls at the far end such that, within each structure, the spatial distribution of skeletal elements reproduced the anatomical form of the human body (Jones 1999: 346-347).

Indeed, this manipulation of skeletal material is a recurrent feature of the mortuary rites associated with the final form of these structures for whilst the cultural treatment of the dead was mediated through the contrasting architectural forms of the chamber, underpinning such variation was the deliberate fragmentation of the corpse following its initial decay and skeletonisation. It is this transformation of the dead from 'fleshed, articulated corpses to groups of disarticulated bone' (Smith & Brickley 2009: 63) that is evidenced at 'almost every site that has been investigated' (Darvill 2004: 150-151). Thus, the presence of articulated skeletons within the chamber at Midhowe, Rousay, suggests that the dead were initially placed in a crouched position on the benches of its stalled compartments prior to their decay and subsequent arrangement in piles of disarticulated bone (Davidson & Henshall 1989: 147). Similarly, at Hazleton North, Gloucestershire, an extended skeleton was found in the entrance of the northern chamber with the 'disarticulated bones of other interments ... scattered deeper within the chamber' (Smith & Brickley 2009: 54), whilst 'two largely articulated skeletons were present with the dispersed and commingled bones of earlier interments' (Smith & Brickley 2009: 54) in its opposed southern chamber. Likewise, at West Tump, Gloucestershire, the 'chamber contained a mixture of articulated skeletons and over 3000 fragments of disarticulated bone' (Smith & Brickley



2009: 53), whilst at Ascott under Wychwood, Oxfordshire, skeletal remains in a 'range of states, varying from a tightly flexed ... articulated inhumation to bones that were completely disarticulated' (Smith & Brickley 2009: 54) were not only scattered throughout its laterally opposed passages and chambers but, in some instances, had been 'reassembled in ways that could not have been possible during life' (Darvill 2004: 147) as well as comprising 'pieces from different individuals' (Darvill 2004: 147). Similarly, within the chambers of Pipton, Penywyrldod and Ty Isaf, Brecknockshire, deposits of bone containing the mixed remains of multiple individuals were not only arranged in spatially discrete groups but, in each case, the 'more or less balanced anatomical proportions' (Wysocki & Whittle 2000: 598) of the elements present suggest 'crude ... attempts to reassemble ... individual skeletons' (Wysocki & Whittle 2000: 598) from the disparate material present. The presence of charred bone within the chambers of these structures also suggests that, in some traditions, the defleshing of the corpse was itself accelerated through burning. In Caithness this is conveyed through the recovery of a thick dark deposit of ash mixed with charcoal, bone-ash, scorched and unburnt bone from the chambers of Kenny's Cairn, Garrywhin, South Yarrows North, South Yarrows South and Ormiegill North (Davidson & Henshall 1991: 60-61), whilst at the Hebridean passage grave of Unival, North Uist, a small cist containing the partially articulated remains of a skeleton suggests that corpses were initially scorched with charcoal prior to the subsequent removal and distribution of charred bone throughout the chamber (Noble 2006: 136; Armit 1996: 75).

Evidence of burning, broken pottery and spreads of cattle bone in the forecourts of these structures suggests that these rites of transformation were themselves mediated through attendant forms of ritual activity concerning the initial positioning of the corpse and subsequent manipulation of its skeletal elements within the chamber (Noble 2006: 128-132; Darvill 2004: 134-136; Masters 1997: 149, 151). Underpinning these practices was not only the 'idea of human existence as a process of *becoming*' (Barrett 1994: 136) through which the dead were progressively assimilated into the wider collective identity of an anonymous ancestral presence, but a corresponding belief in the 'intrinsic powers ... that human remains were held to possess' (Smith & Brickley 2009:

64) such that 'through their continuing physical presence the dead may have been felt to have very real potential to influence the world of the living' (Smith & Brickley 2009: 64). It is this that explains the incomplete nature of those assemblages defining these structures since it was through the selective removal and circulation of skeletal elements – particularly that of the skull and long bones (Darvill 2004: 156) as the most anatomically recognisable parts of the body – that the power of the ancestors were actively invoked in the affairs of the living. Indeed, it is these elements that were not only under-represented at West Kennet (Wells 1962: 80-81; Piggott 1962: 23; 1958: 238), but also at Randwick and Nympsfield, Gloucestershire – where there were 'far fewer skulls than long bones' (Darvill 2004: 146). Similarly, at Upper Swell, Gloucestershire, fourteen lower jaws were recorded compared to that of ten skulls (Smith & Brickley 2009: 69), whilst at Burn Ground, Gloucestershire, the 'assemblage ... was also lacking skulls' (Smith & Brickley 2009: 71). Likewise, at West Tump, Gloucestershire, there were 'insufficient numbers of tibiae present in relation to the rest of the assemblage' (Smith & Brickley 2009: 71), whilst at Lanhill, Wiltshire, 'six skulls were observed with nine lower jaws and the limb bones of a minimum of 11 individuals' (Smith & Brickley 2009: 69). Similarly, at Clachaig and Torlin, Arran, a 'minimum of twenty-two individuals were represented ... but only nine collarbones were identified and although eighteen upper-arm bones were recovered and twenty-one femurs, none ... could be paired' (Noble 2006: 134), whilst at Papa Westray, Orkney, a fragment of skull was recovered from the settlement site of Knap of Howar (Noble 2006: 135).

For Meillassoux, underpinning these rites of transformation and the practices associated with them was a new conception of time consequent upon the movement to the use of land as an instrument of labour for in opposition to the subsistence strategies of a naturally occurring resource base whose 'output is immediately available' (Meillassoux 1972: 99), agriculture entails a different relation to the natural world in that the reproduction of its cycle is ultimately dependent upon the actions of the past as 'at all times the workers of one cycle are indebted for seeds and food to the workers of the previous one' (Meillassoux 1972: 99). Over time these relations of cyclical renewal are characterised by a 'change of generation' (Meillassoux 1972: 99) such that

subsistence indebtedness is owed to 'none of the living ... but only to the dead' (Meillassoux 1972: 99) and it is through this fusing of the present with the past that the conditions are established for the 'emergence of ... a ... cult of the ancestors' (Meillassoux 1972: 99-100) whose 'features find their roots in the social conditions of agricultural production' (Meillassoux 1972: 100).

It is this changing conception of time that is conveyed through the final form of these structures since it was only through the accessibility of the dead that the 'continuity between the past and the present' (Bradley 1998a: 63) could be expressed. This has implications for any 'simple equation between the first appearance of mortuary monuments and the increasing significance of ancestry' (Bradley 1998a: 63) since it is 'these sites, rather than their predecessors, that epitomise a new conception of time' (Bradley 1998a: 51) centred upon the 'exploitation of ancestry' (Bradley 1998a: 51). This suggests that, rather than representing the symbolic elaboration of a new material culture, ancestor rites only became established during a 'developed phase of the Neolithic' (Bradley 1998a: 66) and it is this that is not only conveyed through the chronological horizon of these structures, but the way their changing architectural form coincided with the 'increased continentality of the climate in north-west Europe at this time' (Bonsall *et al.* 2002: 15), with the 'driest conditions centred around 3800 cal BC' (Bonsall *et al.* 2002: 14). It is at this point that the increasing prominence of cultivation is indicated through radiocarbon dating of charred cereal remains for whilst the 'majority of ... dates fall within the fourth millennium cal BC' (Brown 2007: 1044), there is a 'marked concentration of calibrated date-ranges distributed between 3800-3300 cal BC' (Brown 2007: 1044-1048). This accords with the 'dating evidence for ... megalithic tombs' (Brown 2007: 1048) and consequently suggests that rather than being separate from the economy, these structures instead 'developed in parallel' (Bradley 1998a: 66) to it such that their appearance marks the progressive structuring of the Neolithic on an underlying dynamic of ancestry whose forms of cultural expression articulate this spread in cultivation at the level of the economy.

Indeed, it is this developing dynamic of ancestry that is conveyed through the monumentality of these structures for not only was the size of the mound 'greatly in excess of that necessary merely to enclose burial chambers' (Corcoran 1972: 40), but their predominantly 'rectangular or slightly trapezoidal' (Darvill 2004: 73) form suggests that their shape may also have 'acquired a particular ritual significance to such an extent that it was adopted widely by peoples already possessing varied traditions of chambered tomb design without significantly altering the form of their burial chambers' (Corcoran 1972: 40). It is this increasing scale and homogeneity in form that indicates the realignment of these structures within a 'much wider set of traditions' (Darvill 2004: 71) whose shared 'ideas and beliefs' (Darvill 2004: 80) simultaneously 'transcended ... localised traditions of funerary architecture, without abandoning those traditions' (Corcoran 1972: 40).

For Case, this movement to 'burial in massive ritual structures' (Case 1969: 181) expresses the 'stable adjustments of mature and fully extended economies in favourable environments' (Case 1969: 181) whilst, for Corcoran, it is not 'unreasonable to suppose that relatively small and simple tombs ... may more convincingly be attributed to an early rather than to a late stage of ... *landnam*' (Corcoran 1972: 51). In each case the appearance of these structures are seen as consolidating the diverse mortuary forms associated with the economic foot-holds of an initial Neolithic presence. However, rather than representing the cultural reflex of an 'economy ... in ... mature and ... fully extended form' (Case 1969: 180), these structures can instead be read in terms of the way they articulate 'developing notions of ancestry' (Schulting & Whittle 2003: 75) consequent upon the changing configuration of the natural and social worlds. It is this, rather than the economy as such, that explains the subsequent structuring of the Neolithic on an emergent dynamic of ancestry since it was through the modification and elaboration of these earlier structures that both the agricultural reconfiguration of the natural world and its forms of intervention by the social were understood.

#### 4.2 Linearity and the changing form of ancestry.

It is this structuring of the Neolithic through an underlying dynamic of ancestry that explains the lineal reconfiguration in mortuary architecture associated with the emergence of a bank barrow tradition during the 'later part of the Early Neolithic' (Thomas 2006: 229). Spanning the period 3600 to 3000 cal BC (Thomas 2006: 236), these structures not only exaggerate the architectural form of the long barrow in terms of their elongated central mounds and parallel side ditches, but differ from their precursors in that they 'often have no raised ... end ... and ... no formal mortuary deposit' (Thomas 2006: 236). Thus, at Maiden Castle, Dorset, the presence of a higher, 65 metre long, central element suggests that a pre-existent long barrow was extended at both its proximal and distal ends to form a bank barrow 546 metres in length (Loveday 2006: 88-89), whilst at Pentridge 2a-b, Dorset, the proximal end of a long barrow was subsequently lengthened by 80 metres to form a 149 metre long bank barrow (Loveday 2006: 88; Green 2000: 60; Bradley 1991: 51). A similar process of incorporation is indicated through the changing alignment of the 195 metre long bank barrow at Long Bredy, Dorset (Field 2006: 28-30) whilst, at Long Low, Derbyshire, two pre-existent cairns were subsequently conjoined by a 210 metre long bank barrow (Loveday 2006: 95). Likewise, at Eskdalemuir, Dumfriesshire, two opposed 'long mounds on either side of the valley of the river White Esk, Tom's Knowe and Lamb Knowe, may be terminals of a single bank barrow over 2km in length' (Brophy 1999: 124-125) or instead represent 'two separate ... bank barrows of lengths of at least 255m and 650m respectively' (Brophy 1999: 125), whilst at Auchenlaich, Stirlingshire, a 48 metre long trapezoidal cairn was subsequently extended at its distal end to form a bank barrow 342 metres in length (Foster & Stevenson 2002: 115).

These structures have a 'currency identical with that of cursus monuments' (Thomas 2006: 236). However, rather than representing the extension of a pre-existent structure, linearity was here expressed through the emergence of 'enormously elongated rectilinear enclosures, which typically extend in length from 170m to 4km' (Harding & Barclay 1999: 1) – although this could be exceeded, as evidenced by the Dorset Cursus, where a length of 9.8 kilometres

was achieved (Lawson 2007: 71). Defining the perimeters of these structures was either a series of post settings or a continuous bank and ditch (Thomas 2006: 229) whose ends culminated in a convex or squared terminal (Loveday 2006: 114) and whilst their interiors show limited evidence for any associated cultural activity (Barclay & Bayliss 1999: 20; Harding & Barclay 1999: 4), they do exhibit a close spatial and architectural relationship with existing mortuary structures. Thus, in terms of the Dorset Cursus, not only was the structure positioned within 2.5 kilometres of its surrounding long barrows (Bradley 1991: 47), but incorporated into its western bank was the Pentridge 19 long barrow, whilst at Gussage Cow Down, a second long barrow was enclosed within its banks (Bradley 1991: 49). Similarly, at its southern, Thickthorn Down, terminal not only does its obliquely squared angle replicate the alignment of an adjacent long barrow, but its enlarged scale simultaneously reproduces the external form of these earlier structures, whilst, at Martin Down, its northern terminal was aligned on the Pentridge 2a long barrow (Green 2000: 60-61; Bradley 1991: 50-51). A similar patterning is present at the Greater Stonehenge Cursus. Here, not only does its three kilometre length 'separate two major groups of long barrows' (Bradley 1991: 54), but its eastern terminal was aligned on the Amesbury 42 long barrow, whilst, at its western end, the increased depth of its terminal ditch would have provided sufficient material for the construction of a disproportionately large bank that would have itself resembled the form of a long barrow (Thomas *et al.* 2009: 42-44). Likewise, at Rudston, east Yorkshire, four separate cursuses – two of which 'meet at right angles, and two ... intersect' (Bradley 2007: 65) – converge on a central monolith 7.7 metres high and not only can surrounding 'long barrows ... be seen on the horizon from these sites' (Bradley 2007: 65) but, at Cursus A, its squared 'southern terminal ... was so massive that it was excavated ... under the impression that it was a long barrow' (Bradley 1991: 51).

These structures could also be combined with bank barrows to form a composite monument – as evidenced at Stanwell, Middlesex. Here, the presence of truncated post-holes within the ditches of a four kilometre cursus containing an axial mound indicates an initial post-defined structure that was subsequently modified (Loveday 2006: 39, 97) to form an 'internal bank running

along the central line between ... parallel ditches' (Thomas 2006: 236). The distance between these ditches was 'only 20m' (Harding & Barclay 1999: 2) and, whilst this contrasts with that obtaining for cursuses as such – which typically exhibit a width of 'around 50m' (Scarre 2007: 89), although this is exceeded by the 'maximum known width of 128m ... at the Greater Stonehenge Cursus, Wiltshire' (Harding & Barclay 1999: 2) – it accords with the spacing associated with the flanking ditches of the bank barrow tradition (Brophy 1999: 123). A similar process of restructuring is also evident at Scorton, North Yorkshire – where the flanking ditches of an internal bank were subsequently recut to form an axial mound within a narrow, two kilometre long, cursus (Loveday 2006: 37, 97). Similarly, at the Cleaven Dyke, Perthshire, a mound, eighty metres long with narrowly spaced flanking ditches, was not only added to the south-eastern side of an oval barrow (Barclay & Maxwell 1999: 100-101), but was subsequently extended with 'cursus-like spacing' (Barclay & Maxwell 1999: 105) to form a two kilometre long 'cursus/bank barrow' (Barclay & Maxwell 1999: 101) with parallel ditches set '45-51m apart, not flanking the bank, but rather each about 20m from the long central mound' (Brophy 1999: 124).

It is this transposition of elements between contrasting expressions of linearity that points to the presence of a wider conceptual framework whose shared understanding explains the recurrent uniformity in ground plan associated with these structures. Underpinning this framework was the 'common concept' (Loveday 2006: 130) of the long house for whilst bank barrows magnify the external form of these structures and their translation into a house of the dead, they also provide the '*only* source for convex and square terminals closing straight parallel-sided structures' (Loveday 2006: 126). It is this architectural translation that is conveyed through the ground plans of Claish and Balfarg, Fife. Here, two 'fenced enclosures surrounding settings of posts' (Barclay 1993a: 176) replicate the 'plan of the round-ended Claish structure' (Brophy 2007: 79) in that their 'ends ... lie over' (Barclay *et al.* 2002: 110) the 'arc of posts' (Barclay *et al.* 2002: 104) defining the 'inner screens I and VI of Claish, while the side walls are the same distance apart' (Barclay *et al.* 2002: 110). However, rather than providing the intermediate support for a roofed building,

the paired settings of axial posts running through the interior of these structures are better 'interpreted as free-standing platforms for the exposure of the dead' (Barclay 1993b: 182) as the 'unevenness of the internal features' (Brophy 2007: 85) suggests that they 'operated independently' (Hogg 1993: 172) rather than representing part of an 'interdependent structure' (Hogg 1993: 171). A similar template is evidenced at Littleour, Perth & Kinross – where a round-ended structure enclosing a 'large axial post-hole' (Barclay *et al.* 2002: 109) exhibited a ground plan that was almost identical in 'shape and size' (Barclay *et al.* 2002: 110) to that of Claish, whilst, at the neighbouring site of Carsie Mains, an enclosure 'defined by two straight lines ... of ... posts' (Barclay *et al.* 2002: 120) with 'rounded terminals' (Barclay *et al.* 2002: 120) was 'almost identical in size and plan to the structures at Balfarg but ... lack irregular axial post settings' (Loveday 2006: 77).

It is the emergence, during the 'second half of the 4<sup>th</sup> millennium cal BC' (Brophy 2007: 79), of these structures as the 'development of a new type of monument ... derived from ... the traditions exemplified at Claish' (Barclay *et al.* 2002: 110) that the extended 'linearity and recurrent terminal forms' (Loveday 2006: 126) of the cursus tradition expands in a progressively enlarged form. Initiating this 'dimensional ... magnification' (Loveday 2006: 130) are the minor cursiform structures exhibited at sites such as Douglasmuir, Angus. Here, the presence of a transverse line of posts dividing a 65 by 20 metre square-ended, post-defined, rectilinear enclosure (Brophy 1999: 126) not only suggests phased construction through which an original 'one-unit structure ... was later ... doubled in size' (Loveday 2006: 28) but, centrally positioned towards the southern end of its northern section, was a large axial post-hole similar to that exhibited at Littleour (Loveday 2006: 82), whilst the increased scale of the post-holes defining its terminal lines and central division would have accorded emphasis to the 'terminals in the same way that the larger banks did at the mega sites' (Loveday 2006: 33) of Dorset, Stonehenge and Rudston. Extending this 'dimensional doubling' (Loveday 2006: 130) is the segmented, four cell, post-defined cursus at Milton of Guthrie, Tayside – where 'two c.110m x 27m enclosures' (Loveday 2006: 122) were subsequently lengthened through the addition of 'two c.180m x 27m enclosures' (Loveday 2006: 122), whilst, at



Balneaves, Angus, an existing rectilinear enclosure was expanded to form a 500 metre long cursus containing a single internal division (Brophy 1999: 127). Similarly, at the Lesser Stonehenge Cursus, a square-ended 200 by 60 metre enclosure was subsequently extended by 200 metres to form an incomplete 400 metre long 'open-ended cursus' (Loveday 2006: 122) whose intentional cessation was marked by the absence of a second terminal consequent upon the commencement of its monumentalised successor.

In massively exaggerating the ground plan of structures derived from the architectural traditions exhibited at Claish, these enclosures can consequently be seen as representing 'colossally monumentalised houses of the dead' (Thomas 2006: 239) whose empty interiors and consistent terminal forms replicate the domestic architecture of the long house and its translation into a house of the dead. It is this that is differentially conveyed through the elongated mounds and side ditches of the bank barrow tradition and it is this parallel movement from 'moderately sized ... mortuary monuments to huge ... ancestor referencing ones' (Loveday 2006: 142) that points to the presence of a 'wide-ranging ... dynamic of change' (Harding & Barclay 1999: 5) in the 'forces moving society' (Loveday 2006: 143) as not only would the areas occupied by these structures have been set apart from the wider landscape, but their 'substantial acreages would have significantly reduced the carrying capacity of their areas' (Loveday 2006: 145).

For Hodder, this movement to lineal forms of monumentality expresses the outward projection of the *domus* from the tomb as a site for the enculturation of nature (Hodder 1990: 255, 257). It is this presencing of the cultural within the natural that the extended scale of these structures articulate as their shared derivation in the domestic architecture of the long house extends the control of the wild by acting as a 'focus for large tracts of landscape' (Hodder 1990: 257) that reach beyond the segmented social groupings associated with the transformative practices of the tomb. It is this expansion of the *domus* and its capacity to transform the wider *agrius* that, for Hodder, is symbolically conveyed through the construction of these monuments for not only does their extended linearity imply an open environment (Barclay *et al.* 2002: 118) but, confirming

the prevalence of such conditions, is the palaeoenvironmental evidence associated with these sites. Thus, at Rudston, 'pollen analysis ... has produced ... evidence of an open landscape' (Bradley 2007: 67), whilst the analysis of land snails obtained from the base of the ditch of the Dorset Cursus indicates the presence of a grassland landscape for much of its length (Allen 2000: 39, 45) – although patches of ancient woodland continued to exist and, at one point, the structure 'appears to have run through an area of closed woodland' (Bradley 1991: 47). Similarly, at Stonehenge, molluscan evidence indicates that both the Lesser and Greater Cursuses were constructed in an open grassland environment (Allen 1997: 128-129; Allen 1995a: 57; Allen 1995b: 65), whilst, at Auchenlaich, the 'cairn would have been difficult to construct, and its prominence and visibility severely curtailed, had it been built in a wooded environment' (Barclay et al. 2002: 118).

However, rather than symbolising the progressive taming of the wild, these structures – and the palaeoenvironmental evidence derived from them – can instead be read in terms of the way they denote movement in the economic and cultural configuration of the natural and social worlds consequent upon the 'emergence of new forms of sociality' (Whittle *et al.* 2007a: 142) during the 'thirty-seventh century cal. BC' (Whittle *et al.* 2007a: 135). Marking this movement in the form of the social are the segmented ground plans associated with the appearance of causewayed enclosures between '3700 and 3600 BC' (Bradley 2007: 69). Defined by concentric circuits of discontinuous bank and ditch through which an enclosed, inner, circular or oval space is linked – via multiple causeways – to the wider landscape (Harding 1998: 207; Oswald *et al.* 2001: 1; Bradley 2007: 72), these structures tend to be located in 'isolated positions towards the margins of the settled landscape and could often be seen from a distance' (Bradley 2007: 75) in that their positioning on the edge of river terraces and upland slopes not only caused their interiors to 'tilt in the direction ... of lower-lying ground' (Oswald *et al.* 2001: 98), but simultaneously rendered them visible from it – given the molluscan evidence for localised woodland clearance in the areas occupied by these structures (Oswald *et al.* 2001: 104). Echoing this permeability in perimeter form and the openness of their interiors to the surrounding landscape are the assemblages associated with these

structures for whilst their ditch segments contain 'dark, midden-like deposits' (Oswald *et al.* 2001: 123) of 'pottery, worked flint and stone and animal bone' (Oswald *et al.* 2001: 32), they were 'often laid out in formal patterns' (Bradley 2007: 72) and tend to be spatially associated with the causeways formed by their terminals (Harding 1998: 209). Whilst evidence for the 'rapid backfilling of ditches' (Oswald *et al.* 2001: 123) points to the episodic character of such practices, the 'presence of recuts within ditch fills' (Oswald *et al.* 2001: 123) suggests that the original U-shaped profiles of these segments were deliberately maintained as a level base would have been necessary for both the 'purposeful ... deposition of cultural material' (Oswald *et al.* 2001: 123) and its attendant forms of ritual activity (Oswald *et al.* 2001: 40-41). Interspersed with these deposits were the disarticulated remains of human skeletal elements – as evidenced at Windmill Hill, Wiltshire, where, within the primary fill of an outer ditch segment, a 'cranium ... nested within an intact frontlet of an ox, against which were placed the spine of an ox scapula and a distal tibia' (Whittle *et al.* 1999: 89), whilst the secondary fill of an inner ditch segment contained a 'femur ... inserted into the shaft of an ox humerus' (Whittle *et al.* 1999: 106). Similarly, at Hambledon Hill, Dorset, a 'deliberate organic-rich deposit containing pottery, flintwork, animal and human bone was placed at intervals in ... the bottom of the ditch ... together with a number of carefully placed ... skulls' (Green 2000: 51), whilst at Etton, Cambridgeshire, not only were human skulls placed against the eastern terminals of its outer segmented ditch, but the corresponding division of its enclosed inner space was marked by a series of small pits whose fills consisted of soil mixed with pottery, worked flint, human and animal bone (Pryor 1998: 58-61; Bradley 2007: 72).

It is this presence of skeletal elements that points to a spatial connection with the mortuary structures of the early Neolithic since it is the skull and limb bones that are consistently underrepresented in their assemblages. Indeed, in comparing the 'imperfect skeletal representation' (Piggott 1962: 66) at West Kennet with the ditch fills at Windmill Hill, Piggott suggested that the 'remains ... from ... causewayed camps could be explicable ... as evidence of ... rites which involved the use of skulls and other bones taken from tombs' (Piggott: 1962: 68) as 'most concentrations of barrows lie within ... 10km ... of an enclosure'

(Oswald *et al.* 2001: 115). Indeed, within north Wiltshire, over 'twenty long barrows and chambered tombs' (Whittle & Pollard 1998: 233) are located within the 'area encompassed by the causewayed enclosures on Windmill Hill, Rybury and Knap Hill' (Oswald *et al.* 2001: 115), whilst the 'cluster of causewayed enclosures in the Upper Thames Valley mirrors the distribution of chambered tombs ... on ... higher ground ... to the north' (Oswald *et al.* 2001: 115). Similarly, within the central Cotswolds, the enclosures at 'Southmore Grove ... Peak Camp and Crickley Hill ... are spatially linked to nearby long barrows' (Darvill 2004: 193), whilst the 'causewayed enclosure at Maiden Castle seems to be associated with the concentration of long barrows conventionally termed the Dorset Ridgeway Group' (Oswald *et al.* 2001: 115).

Underpinning these spatial relations is an underlying movement in the economic configuration of the social for whilst the mortuary structures of the early Neolithic tend to be located on the 'edge of ... cleared ground' (Darvill 2004: 201), causewayed enclosures were instead positioned at the 'interface between contrasting environments' (Darvill 2004: 200). As a result these structures were optimally sited for the 'effective exploitation of a wide range of resources' (Darvill 2004: 201) whose diversity would have significantly expanded the reproductive capacity of those socially segmented groupings associated with the differentiated environments of the tomb. It is this that explains the marginal positioning of these structures and their openness in perimeter form for in providing 'multiple paths of access' (Harding 1998: 223) to their interiors, these sites would have functioned as locales for the periodic aggregation of 'politically autonomous groups ... at times of resource abundance' (Harding 1998: 223).

Hence the depositional emphasis accorded to the causewayed approaches through these structures and the recurrent backfilling of their corresponding ditch segments – whose 'collections of articulated, or semi-articulated cattle vertebrae' (Grigson 1999: 236) are themselves indicative of an episodic 'extravagance in consumption' (Oswald *et al.* 2001: 123). Indeed, supporting this reading are the contrasting isotopic signatures associated with the skeletal remains recovered from these sites for in reflecting the 'trophic level of an organism' (Richards 2000: 124), stable nitrogen values are able to determine

the degree of dietary protein derived from plants and animals as there is an 'increase ... of about 3‰ each step up the food chain' (Richards 2000: 124) such that whilst 'values of 7-8‰ indicate a relatively mixed diet ... values greater than 10‰ would be consistent with individuals obtaining almost all of their protein from animal sources' (Smith & Brickley 2009: 113). It is this variation in the source of dietary protein that is not only conveyed at Hambledon Hill – whose  $\delta^{15}\text{N}$  values range from 7 to 10.5‰ (Richards 2000: 128-129), but contrasts with that associated with the mortuary structures of the early Neolithic – where respective ranges of 8.9 to 10.4‰, 7.3 to 8.4‰ and 8.1 to 8.5‰ were obtained from the Parc le Breos Cwm, Hazleton North and West Kennet long barrows (Richards 2000: 130-131). The greater isotopic homogeneity of these assemblages suggests that the populations associated with these structures were not only positioned within contrasting environments, but emphasised a 'different balance of plants and animals' (Schulting 2008: 96) in their subsistence regimes and it is this diversity in economic practice that is exhibited through the wider range of stable nitrogen values obtaining at Hambledon Hill and the way this points to an understanding of causewayed enclosures as representing the emergence of 'another kind of sociality' (Whittle *et al.* 2007a: 137) whose scale of interaction exceeded that previously defining the tomb.

It is this movement in the scale of interaction that explains the changing configuration in ancestry as an underlying dynamic structuring the economic and cultural interface of the natural and social worlds for in contrast to the segmented histories of the tomb, these structures locate the past within the shared ancestral history of a wider, confederated social grouping. It is this that explains the presence of the dead at these structures since it is through this movement in rites of ancestry and the assimilation of its practices within the assemblages of the living that both the changing form of the social and the relation it has with the natural world is rendered culturally knowable. As a result, in symbolising the periodic aggregation of these populations at a 'higher level' (Hodder 1990: 260), the dead not only transcend those continuities previously established by the tomb with the present, but simultaneously unifies them as the changing economic configuration of the social causes the natural

world to become positioned within the temporal narratives of a wider ancestral presence.

It is these wider temporal narratives that not only explain the corresponding emergence of a linear monumentality, but the spatial proximity exhibited between these structures and causewayed enclosures since it is through the symbolic exaggeration of the long house as a house of the dead that this movement in the form of the social is culturally represented. Hence the spatial positioning of the Lesser Stonehenge Cursus some 2.5 kilometres from the causewayed enclosure of Robin Hood's Ball (Oswald *et al.* 2001: 134). Similarly, whilst the Dorset Cursus is separated from the causewayed enclosure at Hambledon Hill by a distance of 8 kilometres (Oswald *et al.* 2001: 134), the western side of the causewayed enclosure at Maiden Castle is, in contrast, crossed by the eastern arm of an extended bank barrow (Bradley 2007: 77; Loveday 2006: 89). A similar juxtaposition is also evidenced at Etton for whilst the alignment of the Maxey cursus appears to have been 'bent slightly to pass about 60m to the south-west of the causewayed enclosure ... the terminal of a second cursus ... the Etton cursus, seems to have lain almost entirely within the enclosure' (Oswald *et al.* 2001: 134). Likewise, at Fornham All Saints, Suffolk, not only is the axis of 'two causewayed enclosures ... followed by a cursus which seems to have cut across both earthworks' (Bradley 2007: 77), but the terminals of two other cursuses are located beyond the south-eastern perimeters of these structures (Oswald *et al.* 2001: 135). Similarly, at Hasting Hill, Tyne and Wear, a 'cursus is aligned towards an enclosure' (Loveday 2006: 92), whilst at Cardington, Bedfordshire and Aston, Cote, Shifford and Chimney, Oxfordshire, cursus monuments 'lie ... close to causewayed enclosures' (Oswald *et al.* 2001: 134).

Underpinning this spatial association is an underlying change in the dynamic structuring of the Neolithic for, in defining the ancestral past of a wider, confederated social grouping, these monuments imply the presence of a 'landscape where the assembling of large groups was common' (Loveday 2006: 145). It is this movement in the settlement pattern that the emergence of causewayed enclosures articulate through the depositional practices associated

with the periodic reproduction of their ditch segments (Oswald *et al.* 2001: 36-37; Harding 1998: 223). Hence the chronological overlap exhibited between these structures and the advent of a linear monumentality. As a result these structures and the monuments associated with them not only reflect the changing interface of the natural and social worlds consequent upon the movement to an increasingly open and integrated landscape, but, through their temporal correspondence, simultaneously express the dynamic reconfiguration in ancestry resulting from the short 'active histories' (Whittle *et al.* 2007a: 123) of the tomb.

#### 4.3 Circularity and the displacement of ancestry.

For Burl, the period between 3200 and 2900 BC is seen as representing the emergence of a 'Dark Age' as the effects of environmental degradation informed a 'loss of faith' in the power of the ancestors to effectively intervene in the concerns of the living (Burl 2000: 29-31; 1993: 29-31). As a result, rather than invoking the continuities of the past, the ancestors were instead 'closed off' (Cooney 2000: 168) and it is this rupturing in existing frameworks of cultural understanding that is represented archaeologically through the final sealing and blocking of the mortuary structures associated with the Early Neolithic. Throughout the record the same process is consistently demonstrated as the internal spaces of these structures were subjected to permanent closure either by the infilling of 'passages and/or ... chambers with stones and soil' (Henshall & Ritchie 1995: 58) – as evidenced amongst the chambered cairns of Orkney, Caithness and Sutherland (Davidson & Henshall 1989: 60-61; 1991: 66-67; Henshall & Ritchie 1995: 58-59), or by a 'blocking of slabs or stones ... against the outside of the entrances' (Henshall & Ritchie 1995: 58) – as demonstrated through the piling of rubble in the forecourts of Irish court tombs (Burl 2000: 29) and the construction of a sarsen façade across the entrance to the West Kennet long barrow (Piggott 1962: 18-19; 1958: 237).

As well as marking the end of an 'older tradition focused on ancestors and the past' (Thomas & Whittle 1986: 152), the evidential base also points to the structural modification of mortuary structures appropriate to the meeting of a

new conceptual aim. It is this that is conveyed through the circular setting of monoliths associated with the culmination of the Irish passage grave tradition at Newgrange, County Meath. Dating towards the end of the fourth millennium BC (Bradley 2007: 106), these settings have the effect of defining an external area that was progressively widened towards the entrance of the structure such that emphasis is accorded to the position of the passage, its decorated kerb stone and quartz frontage (Bradley 2007: 112; 1998a: 104). The passage itself is aligned on the mid-winter solstice and through the positioning of a roof-box above its entrance, the light of the rising sun is not only able to penetrate the chamber, but simultaneously illuminates a triple spiral carved onto the right side of its far north-western recess (Stout & Stout 2008: 40; Ruggles 1999: 17). It is the significance of this alignment and its symbolic association with the dead at the critical turning point from 'darkness and cold to light and warmth' (Burl 2000: 62) that is reproduced externally for at the same time as the chamber is penetrated by the rising solstitial sun so, too, is the quartz frontage and the five interlocking spirals of its decorated kerb stone (Cooney 2000: 157). As a result, rather than being confined to the internal space of the chamber, the exterior of the monument also became a focus for ritual activity and it is this movement away from the closed spaces of the tomb that 'marks a significant threshold in the use of monumental architecture' (Bradley 1998a: 101), for in defining an open 'area within which ritual activities take place' (Sharples 1985: 72), its enclosing monoliths replaced the 'private world of the ancestors' (Bradley 1998a: 104) with the outside spaces of the living.

Similar structural modifications are also exhibited through the late cruciform passage graves of the Orcadian Neolithic. Here, evidence for the intentional creation of an open ritualised space exists in the form of external platforms following the 'deliberate destruction or closure of the burial chamber' (Sharples 1985: 72). Thus, at Quoyness, Sanday, an irregular kerb-edged platform measuring some 41 by 32 metres was not only constructed against the outer wall-face of a Maes Howe type passage grave but, at the point where its surface abutted the tomb, an additional 1.2 metre high casing was built around the perimeter of the cairn – thereby sealing the entrance to the burial chamber. Intermixed within the layers of the platform was a midden material containing



animal bones, stone tools and pottery (Davidson & Henshall 1989: 62, 156; Sharples 1985: 72; 1984: 118). Similarly, at Pierowall Quarry, Westray, not only was a Maes Howe type passage grave deliberately 'levelled to a height c. 1m above the old ground surface and then paved over' (Sharples 1985: 72), but the recovery of large quantities of flint and animal bone point to a series of related activities associated with the use of the platform (Sharples 1984: 91). Likewise, at Maes Howe itself not only was the passage grave constructed on an oval clay platform that extended some 15 to 21 metres from the base of its enclosing mound, but bounding its perimeter was a circular earthwork comprising an inner ditch and outer bank (Challands *et al.* 2005a: 229, 235; Davidson & Henshall 1989: 143). Whilst the platform is devoid of any formal features indicative of an accompanying ritual activity, not only did a magnetic susceptibility survey conducted in the area running between the ditch and the passage entrance suggest an 'area of burning' (Challands *et al.* 2005a: 238), but 'phosphate analysis also showed an area of enhancement closer to the ... mound' (Challands *et al.* 2005a: 238). The significance of these readings is contained in their positioning as the south-west orientation of the passage causes the entrance to be aligned on the mid-winter solstice such that, as with Newgrange, the chamber is penetrated by the 'setting sun ... as it drops below the hills of Hoy' (Garrow *et al.* 2005: 252). It is this interplay between the solstice as 'marking ... a period of regeneration' (Challands *et al.* 2005a: 246) and the tomb as a 'place of ... darkness, cold and death' (Challands *et al.* 2005a: 248) that not only explains the presence of these readings, but the indications they give for the use of the platform as a site of ritual activity for in symbolising the concerns of the living at the point of renewal in the annual cycle, the structure was effectively 'turned inside out' (Bradley 2007: 110) as the exterior came to assume 'more importance than the interior' (Bradley 2007: 110).

Underpinning this transformation in ritual space is the dendrochronological evidence for 'abrupt environmental change' (Baillie & Brown 2002: 501) exhibited through a contraction in the annual growth rings of oak on both sides of the Irish Sea at 3195 BC (Baillie & Brown 2002: 502-503). Triggering this 'downturn in oak growth' (Baillie & Brown 2002: 504) is the related evidence

obtained from coring in the Greenlandic ice sheet concerning the presence of an 'exceptional sulphate event ... around 3100 to 3200 BC' (Baillie & Brown 2002: 503) associated with volcanic activity arising from the tectonic positioning of Iceland on the mid-Atlantic Ridge. The impact of this event on ocean circulation and wind direction (Baillie & Brown 2002: 503-504) would not only have resulted in 'long periods of low pressure' (Burl 1993: 30), but its resultant dust veils would also have shaded the sun (Harding 2003: 53-54; Burl 2000: 29-30). It is this movement to 'colder, wetter conditions' (Burl 1993: 30) that is not only reflected in the narrowing of annual growth rings, but explains the corresponding spread of scrub and weeds exhibited by the pollen record in previously cultivated areas (Burl 2000: 29; 1993: 30). Similarly, it is at 3200 BC that agricultural activity at Céide Fields was finally terminated through the smothering of its coaxially defined boundaries with blanket bog arising from the continuous water-logging of its poorly drained soils (Cooney 2000: 27; Burl 1993: 30), whilst the formation of peat in the Western Isles is associated with the onset of a 'worsening climate' (Armit 1996: 66) following the significantly warmer conditions of its interglacial prime around 3500 BC (Armit 1996: 23).

It is the effects generated by this climatic deterioration that is seen as inducing a change in 'human affairs' (Baillie & Brown 2002: 504) as the 'date 3200 is used ... to mark the transition from causewayed camps to large ceremonial henges' (Baillie & Brown 2002: 504). Exhibiting an external diameter of between 20 and 250 metres, these circular or sub-circular structures enclose internal settings of pits, timber uprights or standing stones within an inner ditch and outer bank broken by one or two opposing entrances – although this could be exceeded, as evidenced at Avebury, where four causewayed entrances break external diameters of between 320 and 537 metres (Harding 2003: 6). In sharing a locational preference for 'low-lying positions, on the floor of natural bowls or valleys ... in close proximity to water' (Harding 2003: 54), these structures are seen by Bradley as representing the emergence of a 'circular perception of space' (Bradley 1998a: 122) as their topographical positioning places them within a 'continuous horizon of high ground' (Bradley 1998a: 116) such that they function as a 'microcosm of the local landscape' (Bradley 1998a: 116).

It is this symbolic representation of the wider landscape that is conveyed through the Stones of Stenness and Ring of Brodgar, Orkney. Centrally located in a large basin on a narrow isthmus set between the Lochs of Harray and Stenness, these structures are seen as reproducing the natural topography of their surrounding hinterland in that not only do their outer enclosing banks reference the encircling hills of the wider basin, but evidence of water-logging in their inner rock-cut ditches suggests that they also contained standing water – thereby mirroring the lochs of its partially submerged floor (Garrow *et al.* 2005: 255-257; Richards 1996: 203). Similarly, whilst the height of the sandstone monoliths defining the outer perimeters of their centrally enclosed spaces imitate that of the surrounding hills – those at the Ring of Brodgar averaging 2.8 metres whilst those at the Stones of Stenness reached 5 metres or more (Harding 2003: 74) - their quarrying from the bed-rock at Vestra Fiold and subsequent positioning causes them to replicate the vertical rock formations of the encircling basin such that, through the architectural form of these structures, the natural world is both materialised and recreated (Garrow *et al.* 2005: 257-258; Richards 1996: 205).

A similar homology is exhibited at Avebury. Located within a basin defined by low hills, it is this wider horizon that is symbolically referenced through the architectural form of the structure, for whilst its encircling bank masks the 'ground immediately around the monument' (Watson 2001: 306) – thereby 'removing immediate frames of reference and emphasizing the distant circle of hills' (Watson 2001: 306), its profile also resembles that of its surrounding ridges (Watson 2001: 304). Enhancing this correspondence is the positioning of the structure on a natural, shallow dome such that, where those parts of the bank are obscured through the falling topography of the enclosure, these encircling ridges are not only visible, but follow the line of the bank – causing the hills to 'adopt the role of the bank in those places where the earthwork itself is hidden from view' (Watson 2001: 302). As well as referencing the far horizon, the structure also reflects its material composition, for not only were its internal stone settings derived from the naturally occurring spreads of sarsen distributed through the valleys of its surrounding downland (Watson 2001: 301), but, in returning them to the earth, the use of 'substantial blocks of Middle and Lower

Chalk ... as packing' (Watson 2001: 301) enabled their sockets to simultaneously represent the underlying bedrock of their initial locations.

Similar relations are also evidenced at the Milfield Basin, Northumberland. Here, a clustering of henges positioned along the valley of the River Till reference the surrounding hills of the Cheviots through the orientation of their entrances. Thus, at Coupland, the southern entrance of the henge faces the 'foothills of the Cheviot massif ... a couple of miles to the south' (Harding 2000: 270), whilst, at Milfield North, the henge not only frames the twin summits of Yeavinger Bell to its south, but a range of 'hills in the general direction of the Cheviot' (Harding 2000: 272) – which, at 815 metres, represents the highest peak of the enclosing basin (Harding 2000: 271). Similarly, at Yeavinger, the eastern entrance of the henge is oriented towards the rounded hill of Ross Castle and a further 'line of ... hills 15 km away' (Harding 2000: 272). In each case the depth of the internal ditches suggests that the outer banks of these structures would have been substantial such that they would have both obscured and mirrored the surrounding topography with the exception of that afforded by the visual envelopes of their entrances (Harding 2000: 270) which, in referencing prominent stretches of the horizon, would have drawn its features into their architecture.

As well as symbolising the 'physical rim of the ... world' (Harding 2003: 51), these structures also connect the earth with the sky through the verticality of their architecture. It is this that is conveyed through the stepped profile afforded by 'multiple circuits of bank, ditch and stone' (Gillings & Pollard 2004: 66) at Avebury, for whilst its enclosing bank and inner ditch exhibit respective heights and depths of between 4 to 6 and 4 to 5 metres (Pollard & Reynolds 2002: 84) – although 'early twentieth-century excavations ... showed the ditch to be originally ... in the order of 10-14m' (Pollard & Reynolds 2002: 84), the 'sarsens employed in the interior settings show a progressive increase in size, from the outer to the inner circles' (Gillings & Pollard 2004: 66) – those of the outer circle exhibiting heights of between 2 and 3.9 metres, whilst those of the two inner circles average 3.4 metres (Pollard & Reynolds 2002: 86). Culminating this profile are the enclosed 'massive settings' (Gillings & Pollard

2004: 66) of the Cove – whose remaining stones exhibit heights of 4.4 and 4.9 metres (Pollard & Reynolds 2002: 87) and Obelisk – which originally stood to a height of between 5.5 and 6 metres (Pollard & Reynolds 2002: 87). As well as rising ‘above the bank and surrounding downland’ (Gillings & Pollard 2004: 66), it is these settings that are emphasised through their positioning along the line of a ‘shallow north-south ridge’ (Gillings & Pollard 2004: 63) running through the centre of the enclosure, for as the ground descends to its sides, the ‘ridge ... constitutes the near horizon’ (Watson 2001: 302) – thereby causing the stones of the inner circles to become ‘skylined and crested upon the break of slope’ (Watson 2001: 302).

A similar profile frames the concentric architecture of Stonehenge, for whilst its outer circle of lintelled sarsens exhibits an average height of 4 metres (Walker & Gardiner 1995: 26), this is progressively increased through the graded heights of its inner horseshoe setting, for whereas the outer north-eastern pair of trilithons have an ‘overall height ... of just over 6m’ (Walker & Gardiner 1995: 29), this not only rises to 6.6 metres for the central pair, but culminates with that of the south-western trilithon – whose remaining upright stands at 7.3 metres (Walker & Gardiner 1995: 29). Replicating this patterning is that of their accompanying bluestones, for whilst those of the outer circle exhibit heights of 2 metres (Walker & Gardiner 1995: 29), those of the horseshoe follow that of the trilithons in that they gradually increase in size from 1.8 metres at its open end to 2.4 metres at its apex (Atkinson 1979: 54). Enhancing the verticality of this profile and its projection into the enclosing skyscape is the tendency for the sarsens of the inner horseshoe and outer circle to generate the ‘illusion of straightness’ (Atkinson 1979: 37) through the convex tapering of entasis since it is through the slight curving of these ‘stones ... towards the top’ (Atkinson 1979: 37) that the ‘foreshortening effect of their height when viewed from below’ (Walker & Gardiner 1995: 26) is counteracted. Similar effects are generated through the shaping of the lintels for whilst those of the outer circle minimise the ‘illusion of recession’ (Atkinson 1979: 43) by standing at a lower height from the ground, those of the trilithons increase in width towards the top – thereby causing their sides to be ‘inclined ... towards the ground ... creating the illusion that they are vertical’ (Atkinson 1979: 43).

In referencing the circular landscapes and skylscapes forming the elevated horizons of their surrounding basins, these structures can consequently be read in terms of the way they represent an '*axis mundi*' (Richards 1996: 206) through which the social and natural worlds were understood. Central to this understanding was the dependence of the social upon the natural world for its reproduction and it is this that is conveyed through the verticality and homological correspondence of these structures since it is through the fusing of the sky with the symbolic representation of its enclosed landscape that both the interconnected nature of the natural world and the form of its relation with the social was recognised and known. Hence their circular form for as well as enabling their architecture to extend 'outwards ... and upwards' (Bradley 1998a: 109) into the natural world, these structures also symbolised the imagery of the circle as having no beginning or end such that its 'form ... serves as a ... metaphor for the endless repetition of the seasons and ... cycles of birth, reproduction and death' (Gillings & Pollard 2004: 65).

It is this concern with the cyclical renewal of the natural world that not only explains the ritual purpose of these sites, but the centrality accorded by their architecture to the sky for 'given the importance of ... seasonal changes in the landscape in terms of light, warmth and resources ... the marking ... of particular turning points ... would have been of considerable social significance' (Cooney 2000: 88). Hence the emphasis accorded by these structures to the cyclical movements of the sun and the moon – as evidenced at Stonehenge. Here, not only does the rectangular setting of its four Station Stones reference the 18.6 year lunar cycle through the alignment of its north-western and south-eastern sides on moonset at the northern major limit and moonrise at the southern major limit, but its north-eastern and south-western sides follow the solstitial alignment of its principal axis (Ruggles 1999: 138; 1997: 219-220). It is this axis that is not only straddled by the south-western trilithon but is emphasised through the line of the Avenue, the paired settings accompanying the remaining Slaughter Stone and Heelstone at and immediately beyond its causewayed entrance and the increased spatial setting of the outer sarsen circle at stones 1 and 30 such that, at the mid-summer solstice, a solar corridor was formed through which the light of the rising sun penetrated the structure to

strike the Altar Stone positioned on the axis at the apex of its inner horseshoe setting (Pitts 2001: 229; Ruggles 1997: 221). It is this stone that is not only emphasised through the directionality of the Avenue and open horseshoe setting, but lies beneath an aperture formed by the gap between the tallest bluestone and the corresponding uprights and lintel of the south-western trilithon – suggesting that the ‘significant association was the alignment of the Altar Stone in the direction of midwinter sunset’ (Ruggles 1997: 219) since it was through this opening that the descending solstitial sun was framed as its light penetrated the circle (Burl 2006: 210, 214).

Likewise, at Callanish, Lewis, the latitudinal positioning of a series of circular structures and stone settings forming the ‘Callanish Diamond’ at the head of East Loch Roag reference the interplay resulting from the horizon profiles of the Pairc and Clisham Hills and the moon at the southern extreme of its major standstill (Ponting 1988: 426-427; Ponting & Ponting 1984: 52; 1981: 78) for at this latitude and point in its 18.6 year cycle, the ‘moon rises so close to due south that its path ... is less than 2° above the horizon’ (Ponting & Ponting 1984: 46) – causing the moon to skim these profiles as it rises out of the Pairc Hills and descends into Mount Clisham, to briefly reappear in the V-shaped notch of Glen Langadale (Ponting 1988: 427). Whilst this movement is differentially referenced through the individual sites of the diamond it is not, however, visible from the principal site of Callanish I (Ponting 1988: 429; Ponting & Ponting 1981: 76). Here, the alignment formed by the axis of a circle of thirteen stones enclosing a 5 metre high monolith with radiating lines to its south, west and east-north-east and approached by an avenue of two stone rows running from its north-north-eastern perimeter (Burl 2000: 202-204) to the Clisham Hills and Glen Langadale is obscured by the outcrop of Cnoc an Tursa (Ponting 1988: 427). As a result, rather than referencing the interplay of land and sky resulting from the low altitudinal positioning of the moon at maximum southern declination, the skimming of the southern horizon is instead conveyed symbolically through the architecture of the structure, for when viewed from the northern end of the avenue the moon continues to rise from the Pairc Hills, but then skims ‘across the stones of the east row’ (Ponting 1988: 427) before ‘disappearing into ... Cnoc an Tursa’ (Ponting 1988: 427) to then reappear at

the 'base of the tallest stone, which stands within the circle' (Ponting 1988: 427). That this 'symbolic descent of the moon into the circle' (Ponting & Ponting 1981: 77) was intentional is indicated through the topographical positioning of the structure for whilst the 'avenue ... and long axis of the circle ... is aligned towards the Clisham range, it cannot have been intended that these hills were to be viewed along it, for by building the avenue a few metres further west, a clear sight line was available' (Ponting 1988: 429). As well as referencing the southern extreme of the lunar cycle, the northern end of the avenue also exhibits a solar orientation since it is from here, rather than the circle, that the mid-winter sun could be seen to set into a mountain and then briefly reappear through a prominent notch in the south-western horizon (Ponting 1988: 430; Ponting & Ponting 1984: 10; 1981: 75).

These structures can also exhibit an astronomical symbolism despite the absence of any formal alignments in their architecture. Thus, at the Stones of Stenness, whilst the north-north-east orientation of its single causewayed entrance obviates against any direct solar alignment (Challands *et al.* 2005b: 218), the mid-winter solstice is, however, referenced through the bevelled tops of its architecture for when viewed from the north-eastern side of the structure, the angled slopes of those monoliths positioned at its south-western circumference follow the line of the setting sun as it descends into the topographical relief of Hoy (Garnham 2004: 163). Likewise, despite the lack of any convincing evidence regarding the presence of a solar alignment at Avebury (Watson 2001: 302), the Obelisk is reputed to have cast a 'phallic ... shadow across a vulva-marked stone on May Day' (Harding 2003: 78); and given the centrality accorded by the deep space of the inner southern circle to this setting together with its proximity to 'four pits ... filled with clean soil' (Watson 2001: 301), suggests some form of ritual symbolism associated with the fertility and regeneration of the earth (Harding 2003: 78).

It is this symbolism that is not only presaged through the transformation in ritual space associated with the developed passage graves of the late fourth millennium BC, but explains their chronological overlap with the first appearance of henges (Harding 2003: 12) as the 'archetypal ritual sites of the



third millennium BC' (Harding 2003: 9) for, in emphasising the interconnected nature of the natural world and the dependence of the social upon it, these structures represent the 'transition to a different ... form of society' (Harding 2003: 9) centred upon an emergent dynamic of circularity. Indeed, it is this movement in the dynamic structuring of the Neolithic that is not only conveyed through the circular architecture of these structures, but underpins the 'appearance of new types of material culture in the first few centuries of the third millennium BC' (Harding 2003: 9) – as evidenced in the curvilinear motifs associated with the spiral in megalithic art and Grooved Ware as a new ceramic tradition, the gapped circle and cup-and-ring markings associated with the rock art of Ireland and northern Britain, the appearance of carved stone balls in north-eastern Scotland and the circular ground plans associated with the domestic architecture of Rinyo, Skara Brae and Barnhouse, Orkney (Harding 2003: 56-58; Bradley 1998a: 105-106; Richards 1985: 308).

For Bradley, structuring this change in material culture was the emergence of a 'circular archetype' (Bradley 1998a: 101) whose recurrent symbolism had its origins in the dislocative effects generated by the '3195 BC event' (Baillie & Brown 2002: 502) on existing frameworks of reproduction for rather than positioning the natural and social worlds within the continuities and interventions of the past, the social was instead understood through its relation to the earth and the sky. As a result strategies of reproduction became enclosed within a circular conception of the world and it is this movement in cultural understanding that not only marks a 'radical break with the past' (Harding 2003: 26), but explains the changing dynamic configuration of the Neolithic, as the realignment of the natural and social worlds undermined existing frameworks of belief centred upon the ability of the ancestors to effectively regulate the affairs of the living. Rather than being dependent on the past, the living were instead dependent upon the cyclical regeneration of the natural world and it is this that explains the ritual emphasis accorded to the sun and the moon since it was through the symbolic associations held by their movements as 'expressions of continuity' (Harding 2003: 48) that the continuing reproduction of the social was culturally assured.

Whilst undermining the cultural frameworks of the Early Neolithic, this realignment in the natural and social worlds did not, however, entirely displace them as 'elements of ... older ... beliefs' (Gillings & Pollard 2004: 60) continued to permeate the ritual practices of the third millennium BC. Indeed, it is this referencing of the past that is not only foreshadowed through the solstitial alignments of Newgrange and Maeshowe, but continues with the presence of coves at Avebury, the Stones of Stenness, Cairnpapple – West Lothian, Stanton Drew – Somerset and Arbor Low – Derbyshire (Burl 2000: 31). Comprising a backstone with 'two sideslabs but no capstone' (Burl 2000: 31), these structures are seen by Burl as representing symbolic 'reductions of chambered tomb architecture' (Burl 2000: 33) in that their open cellular form replicates the 'rectangular chambers in megalithic tombs' (Burl 2000: 32) – although a variant is exhibited at the Stones of Stenness, where its arrangement of 'two front slabs ... together with a third ... set centrally ... behind ... resembled ... the projecting sideslabs and backstone' (Burl 2000: 32) associated with the chambers of the Orcadian stalled cairn.

Thus, at Avebury, the remaining stones of a cove exhibiting heights of 4.4 and 4.9 metres (Pollard & Reynolds 2002: 87) occupied the deep space of the inner northern circle and with its open end fronting the north-east, faced the 'general direction of ... midsummer sunrise' (Burl 2002: 147). Similarly, at Arbor Low, the open end of a rectangular setting 'standing to a height of over ... 2.7m' (Harding 2003: 71) was directed towards the 'maximum moonset' (Burl 2002: 228); whilst that at Stanton Drew was 'roughly aligned towards extreme moonrise' (Burl 2002: 228). Likewise, at Callanish I, rather than simulating a megalithic chamber through the architectural form of the cove, the past was instead directly referenced through the presence of a 'diminutive chambered tomb of Orkney-Cromarty type' (Burl 2000: 203-204), set between the perimeter of the circle and the base of its centrally enclosed monolith such that, at the time of the southern lunar extreme, the moon would briefly re-gleam above its chambers as it reappeared from behind Cnoc an Tursa (Ponting 1988: 427).

It is the associations established by these structures between the past and the sky that illustrates the changing dynamic configuration of the Neolithic for rather

than mediating the natural world through the past, the past was instead invoked by the living as a symbolic resource in the cyclical mediation of its relations with the sky since it was through the ritual renewal of the sun and the moon at their points of return that the continuing reproduction of the social was secured. It is this harnessing of the past and its subsumption within circular frameworks of cultural understanding that not only explains the solstitial interplay between the sun and the dead at both Newgrange and Maeshowe, but the lunar symbolism associated with the enclosed passage grave at Callanish I – where the effects generated by an encroaching sea level resulting from the absence of any marked isostatic readjustment in the land during the post-glacial period (Armit 1996: 27-28) accorded ritual significance to the moon and the influence exerted by its gravitational pull on a rising tidal level.

In fusing the cultural residues of the Early Neolithic with circular forms of ritual practice, these structures not only articulate the changing dynamic configuration of the Neolithic, but the subordination and realignment of ancestry within it. It is this movement in the dynamic structuring of the Neolithic that is not only initiated through the transitional tear, represented by the developed passage graves of the late fourth millennium BC, in existing frameworks of cultural understanding but explains their chronological correspondence with, and spatial proximity to, the first appearance of henges as a new form of circular architecture defining the ritual practices of the third millennium BC – as indicated by the Stones of Stenness, whose enclosing ditch is ‘associated with radiocarbon dates of 3100-3000 BC’ (Bradley 2007: 112) and is sited 1.2 kilometres to the west of Maeshowe, whose dating is thought to be ‘around 3000 BC’ (Bradley 2007: 112). The dating of the enclosing ditch at Stonehenge to ‘around 3000 cal BC’ (Cleal 1995: 108) suggests that the forces shaping this movement in ritual practice were not only widespread and rapid, but progressively deepened through the dating of Callanish I to between 2900 and 2600 BC (Ashmore 1999: 130), the enclosing ditch at Avebury to between 2840 and 2460 BC (Pollard & Cleal 2004: 121) and Milfield North to between 2460 and 2030 BC (Harding 2003: 15) such that, following the restructuring of the late fourth and early third millennia BC, the Neolithic was increasingly centred within a developing dynamic of circularity whose forms of cultural understanding

expressed the changing configuration of the natural and social worlds consequent upon the '3195 BC tree-ring event' (Baillie & Brown 2002: 504).

## **Chapter 5. Contemporary archaeological theory and the Neolithic.**

### **5.1 Post-processualism and the theoretical privileging of the individual.**

It is this reading of the Neolithic through the changing dynamic configurations of ancestry and circularity that is rendered problematic by the hegemonic positioning of post-processualism within contemporary archaeological theory for in constructing the past through the 'hidden structures underlying visible reality' (Thomas 2004: 154), such approaches necessarily articulate the distinction accorded by modernist conceptions of knowledge to 'depth and surface' (Thomas 2004: 169). Underpinning this distinction is the epistemological relation occupied by knowledge to its object for rather than being given within the surface appearance of its reality, its source is instead seen to reside in those 'aspects of reality ... not immediately visible' (Thomas 2004: 152) since it is these that 'explain the character of more readily accessible phenomena' (Thomas 2004: 152). It is the effects generated by this 'search for hidden depths' (Thomas 2004: 149) that is opposed by post-processualism since it is through the perceived identification of that causality underlying the overall determination of its surface reality that the past is positioned in and constructed through the accompanying metanarratives of an Enlightenment based historiography. Rather than recovering the past through the totalising frameworks of modernist knowledge; knowledge is instead seen to reside in the experiential frameworks of its lived existence and it is the emphasis this accords to an interpretative archaeology that explains the conceptual ascendancy of the individual within contemporary archaeological theory since it is through the 'search for past minds and the meanings they contained' (Thomas 2004: 214) that knowledge of the past is generated.

It is this recovery of the past through the reading of those meanings embedded within its material culture that informs the emergence of a post-processual landscape archaeology. Derived from the phenomenological perspectives of Heidegger and Merleau-Ponty post-processual landscape archaeology is concerned with the way 'people experience and understand the world' (Tilley 1994: 11) through the landscapes they inhabit, for rather than providing a neutral backdrop to action, the landscape is instead regarded as the medium for

such action (Tilley 1994: 23). Underpinning this understanding is the ontological relationship posited by Heidegger between being and being-in-the-world for whilst individuals are immersed in the world, they also 'objectify the world by setting themselves apart from it' (Tilley 1994: 12). However, as there can be no external world that is separate from the knowledge that the individual has of it, the spatial distance created by the 'process of objectification ... between the self and that which is beyond' (Tilley 1994: 12) is seen by Merleau-Ponty as being bridged by the body as the fundamental 'vehicle for being-in-the-world' (Cummings & Whittle 2004: 11) for in constituting a way of 'relating to, perceiving and understanding the world' (Tilley 1994: 14), the 'body provides the fundamental mediation point between thought and the world' (Tilley 1994: 14).

It is this understanding of the world as being encountered and engaged through the '*perception of the body*' (Cummings 2009: 125) that frames the post-processual reading of the Neolithic landscape for, in marking places of significance, the topographical setting of its monuments are seen as structuring perception through the control they establish over perspective (Tilley 1994: 204). As a result the landscape is known through the relation it has with these structures and the way their locations orient the body to a particular understanding of its features in terms of the meanings associated with them. Landscape archaeology consequently has, as its objective, the recovery of those meanings established by the 'vantage points of ... monuments ... and their relationships to the outside world' (Tilley 1994: 204) since it is through the phenomenological understanding of how these structures fixed 'perception of the world beyond' (Tilley 1994: 203) that knowledge is produced concerning the way the landscape was experienced and understood during the Neolithic.

It is this recovery of the Neolithic through the phenomenological reading of its monuments that is conveyed through the landscape archaeology of south-west Wales. Defining these landscapes is the architectural form of the portal dolmen and the locational preference it has for the slopes 'positioned on the margins of the low-lying landscape' (Cummings & Whittle 2004: 39) as a focal area for settlement. Through this topographical setting, these structures were

consequently positioned to have a 'restricted view in one direction' (Cummings & Whittle 2004: 37), thereby causing their locations to emphasise the visual links established by these structures with the landscape features of the Mynydd Preseli. Within this upland region, it is the visually distinctive profiles of Carn Meini and Carn Ingli that are 'repeatedly referenced' (Cummings & Whittle 2004: 82) through the open vistas of these structures and points to their symbolic importance both in terms of the views they command over the surrounding topography as well as in the outcroppings of igneous rock characterising their summits. These outcroppings are also a distinctive feature of the wider landscape, where they erupt as igneous intrusions through the underlying Ordovician geology to form 'dominant focal points in the landscape' (Tilley 1994: 99). As with the Mynydd Preseli, it is these focal points that are consistently referenced through the visual fields established by these structures as their topographical setting causes the profiles resulting from these intrusions to be skylined on the horizon (Cummings & Whittle 2004: 80) – as evidenced at Pentre Ifan and the relation it has with the 'four prominent outcrops of Carnedd Meibion-Owen' (Cummings & Whittle 2004: 29) situated some 700 metres to its north-west (Tilley 1994: 99). Similarly, from Garn Turne, the 'outcrops of Great Treffgarne are visible on the skyline' (Cummings & Whittle 2004: 29), whilst Carreg Samson is located between 'two low circular ... outcrops, with which it is intervisible' (Tilley 1994: 99).

As with Carn Meini and Carn Ingli, these outcrops are seen as having symbolic significance through the resemblance their forms have with 'built architecture' (Cummings 2009: 149) such that, for Tilley, they appear in the landscape as 'natural ... or non-domesticated megaliths' (Tilley 1994: 99). Indeed, the igneous intrusions forming the profile of Carn Meini are regarded by Cummings as defining a 'rather ambiguous place, where natural outcrops share qualities with the ... architecture of ... chambered tombs' (Cummings 2002b: 117) such that, during the Neolithic, it 'may have been interpreted as the mountain of the ancestors' (Cummings & Whittle 2004: 83) through the appearance its summit gives of being 'covered in monuments' (Cummings 2002b: 118). It is this potential conflation of the cultural and the natural within the cognitive frameworks of the Neolithic that, for post-processualism, explains the 'highly

structured and repetitive' (Tilley 1994: 93) positioning of its monuments in relation to these topographic features for in being perceived as the ancient 'monuments of the ancestors' (Cummings & Whittle 2004: 81), these structures are seen as orienting the body towards a reading of the landscape in terms of beginnings and the creation myths associated with the foundational narratives of a deep ancestral past (Cummings & Whittle 2004: 77).

It is this shaping of perception through the outward projection of these narratives that explains the architectural form of these structures and the tendency they have to be 'located on intrusive igneous rocks' (Cummings & Whittle 2004: 28) since it is through these geological settings that their raised capstones and supporting uprights impregnate the landscape with meaning through the architectural referencing of its topographically distinctive features. Thus, at Pentre Ifan, not only does the slope of its capstone replicate the inclined profile of the outcroppings on Carn Ingli (Tilley 1994: 105), but the presence of partially buried stones adjacent to underlying pits at both Pentre Ifan and Carreg Samson suggests that the capstones were themselves directly raised from the immediate ground surface (Cummings & Whittle 2004: 73) – which, at Pentre Ifan, was subsequently refilled with 'stone ... of igneous type rather than the immediately local shale' (Cummings & Whittle 2004: 73). Similarly, rather than being enclosed within a covering mound, the absence of any significant material relating to the presence of a 'mounded and enclosing pile of stones' (Cummings & Whittle 2004: 74) at both Pentre Ifan and Carreg Samson suggests that surrounding 'cairns were often never more than low platforms' (Cummings & Whittle 2004: 74) through which the supporting uprights of these structures rose – thereby causing their capstones to have the appearance of 'almost floating above the ground' (Cummings & Whittle 2004: 38).

In rising from a 'surface of stone' (Cummings & Whittle 2004: 76), the architectural form of these structures are consequently seen as not only replicating the natural features of those landforms enclosed within their fields of vision but recreating, through their symbolic representation of the 'first rising of the earth' (Cummings & Whittle 2004: 77), the central elements of those



foundational narratives informing their understanding. Hence the liminal positioning of these structures between the landscapes of the living and those of a deep ancestral past since it is through their cognitive understanding as 'places that are in between worlds' (Cummings & Whittle 2004: 87) that the perceptive and experiential frameworks of the living are oriented towards a reading of the landscape in terms of the meanings embedded within their architecture and fields of vision through the corresponding visibility accorded to these structures by their horizon locations from low lying areas (Cummings & Whittle 2004: 87).

It is this shaping of perception through the outward projection of meaning that similarly explains the visual and textural qualities associated with the architectural form of these monuments since it is through the materiality of their constructional elements that the landscape is brought into the experiential frameworks of these structures. It is this that is conveyed through the differentiated use of colour in the megalithic landscapes of Arran for whilst its mortuary structures express the immediate geology of their locations, they also incorporate into their architecture stones of a contrasting lithology. As a result these structures reflect the colours of a wider geology as the Old Red Sandstone forming the southern part of the island is combined with the white granites and schists of the north (Jones 1999: 343). However, rather than being deployed randomly through the architectural form of these structures, this use of colour was instead patterned as the contrasting lithologies of those stones comprising their constructional elements were positioned in relation to their geological source such that in terms of the chamber at Sannox, the 'east wall of sandstone is oriented towards outcrops of sandstone on the coast, while the west wall of granite is oriented towards the granite mountains to the west' (Jones 1999: 343). Likewise, the 'alternating pattern of red and white stone' (Jones 1999: 343) defining the chamber, capstones and façade at Carn Ban replicates the geological setting of the structure 'between an area of sandstone and schist' (Jones 1999: 343). Indeed, this differentiated use of colour is a recurrent feature of 'all the chambered tombs on Arran' (Jones 1999: 343) for whilst those 'tombs with a facade of granite or schist have alternating panels of sandstone ... those ... with facades of sandstone ... have a cairn mass

composed of schists and granites' (Jones 1999: 343-344) such that, in each case, the materiality of their constructional elements establish these structures as a 'place which draws in, and gives meaning to ... the wider landscape' (Jones 1999: 349).

It is this symbolic representation of the landscape that is similarly conveyed through the textural qualities of these structures. At Cairnholy I and II this is exemplified through the textural opposition established by the axis of these structures between rough and smooth stone such that in dividing each 'monument into two halves' (Cummings 2002c: 254), their constructional elements reflect the broader division of the 'surrounding landscape into open and closed views' (Cummings 2002c: 256). Whilst this division is expressed through the textural composition of the façade at Cairnholy I, at Cairnholy II it is 'augmented by the chambers' (Cummings 2002c: 256) such that, in each case, the texturally smooth side of these structures are associated with a 'wide and expansive view ... towards the sea ... and the Isle of Man' (Cummings 2002c: 255) whilst that of their texturally rough sides is 'more restricted' (Cummings 2002c: 255). In texturally referencing the fields of vision established by the topographical setting of these monuments, the constructional elements of these structures are consequently seen as orienting the body towards a reading of the landscape through the oppositions their axial divisions create between 'rough and smooth ... stones ... open and closed views ... coast and inland ... areas' (Cummings 2002c: 258) and the emphasis this accords to the experiential framework of the sea and the perceptual association it has with origins and the Isle of Man as a route of Neolithic movement (Cummings & Fowler 2004: 120; Cooney 2004: 147).

This textural incorporation of the landscape into the meanings of these monuments is also evidenced at Carreg Samson for whilst the uprights forming the northern side of its chamber are texturally rough, those of the southern side are 'smooth and regular' (Cummings 2002c: 251). As a result, the monument is not only texturally divided through the differential positioning of those stone types comprising its constructional elements, but this division is, itself, seen as 'embodying different parts of the landscape' (Cummings 2002c: 257), for in

replicating the textural qualities of the capstone, the rougher stones to the north are 'likely to be local' (Cummings 2002c: 257), whilst those of the south are more likely to have been 'derived from further afield' (Cummings 2002c: 257) as they do 'not outcrop in the immediate vicinity' (Cummings 2009: 96) of the structure. In combining stone types of 'different textural properties' (Cummings 2002c: 251) within the architectural form of the monument, the constructional elements of the chamber are consequently seen as structuring perception through the meanings associated with its textural composition and the relations these establish with the wider landscape.

A similar process is exhibited through the bayed construction of the South Street and Beckhampton Road long barrows, for whilst the bays forming the southern side of the mound at South Street were filled with chalk rubble, those of the northern side had as their 'main constituent ... coombe rock' (Ashbee *et al.* 1979: 260). A similar opposition characterises the mound at Beckhampton Road, for whilst the 'bays north of the axis contained marl with occasional tips of chalk gravel ... those on the south side ... were ... filled with coombe rock ... and ... brickearth' (Ashbee *et al.* 1979: 240). Although derived from the flanking ditches accompanying each structure (Ashbee *et al.* 1979: 234, 257), these contrasting combinations also reflect the positioning of these structures on 'vegetational or soil boundaries' (Pollard & Reynolds 2002: 62), for whilst South Street was located 'on the edge of cultivation' (Pollard & Reynolds 2002: 62), Beckhampton Road was 'sited on the boundary between rendzina and brown earth' (Pollard & Reynolds 2002: 62). As a result, the mounds not only reflect the boundary settings of these monuments but, through the materiality of their constructional elements, structure perception of the surrounding landscape through the meanings embedded within the textural composition and colouring of their opposing sides.

The colouring and textural composition of the mounds defining the developed passage graves of the Brú na Bóinne are also illustrative of this shaping of perception through the materiality of their constructional elements and the associations these establish with the wider landscape, for whilst the quartz frontage at Newgrange was 'embellished with dark ... granite' (Lynch 1998: 63),

the 'mound at Knowth was decorated not only with quartz and granodiorite but also with blue and white striped siltstone cobbles' (Lynch 1998: 63). As with Newgrange, these contrasting textures and colours were located 'near the entrance to the eastern and western tombs' (Lynch 1998: 63) such that through their positioning at significant points within the structure of the mound, these monuments would have been understood in terms of the relations they have with the wider landscape for whilst the 'source of the ... quartz would have been the granitic mass of the Dublin/Wicklow mountains ... 40 km ... to the south ... that ... of the rounded granite and granodiorite cobbles and oval banded siltstones appears to have been ... the northern shore of Dundalk Bay ... 35 km to the northeast' (Cooney 2000: 136).

Indeed, it is this structuring of perception through the materiality of these monuments that receives its most developed expression in the transported landscapes of Stonehenge for whilst its sarsen settings were sourced from the Marlborough Downs some 40 kilometres to the north, those of the accompanying bluestones have their origin in the Mynydd Preseli – 220 kilometres to the west (Darvill 2006: 136-137). Whilst those comprising the outer bluestone circle consist of a series of dolerites, rhyolites and tuffs obtained from 'outcrops scattered ... along and around the main Preseli ridge' (Darvill 2006: 137), those of the inner horseshoe setting were exclusively sourced from the outcrops of spotted dolerite located on and around its summit at Carn Meini (Darvill 2006: 125). As a result, not only is the 'general pattern of rock outcrops in the Preseli landscape ... matched by the disposition of bluestones at Stonehenge' (Darvill 2006: 137), but their inner setting also resembles the architectural form of the bluestone structure at Bedd Arthur (Darvill 2006: 128). Located on a terrace cut into the southern side of the Preseli ridge and overlooking the outcrops of Carn Meini, this oval setting of seventeen bluestone pillars not only shares the 'axial alignment of the Stonehenge ... setting' (Darvill & Wainwright 2003: 32), but replicates its architectural form in that its 'pillars range in height from about 1.7m down to less than 1m and were graded in height from the highest at the south west to the lowest at the north east' (Darvill & Wainwright 2003: 32). Although the Stonehenge setting is 'broader than Bedd Arthur' (Darvill & Wainwright 2003:

32), these structural similarities not only suggest that the 'two must be closely connected' (Darvill 2006: 139) but through its reproduction of the Carn Meini landscape, both the materiality and positioning of the bluestones at Stonehenge can consequently be seen as structuring perception through the symbolic framework of the Mynydd Preseli and the associations it has with the temporal narratives of a deep ancestral presence.

Extending this recovery of the Neolithic through the phenomenological reading of its monuments is the accompanying emphasis accorded by post-processualism to the interpretation of those experiential frameworks resulting from movement within the architectural form of these structures themselves and the way these inform an understanding of its lived existence through the controlled engagement of those meanings embedded within them. It is this that the Cotswold-Severn grouping of chambered long barrows articulate through their contrasting zones of darkness and light resulting from the preferential orientation that their proximal ends have for the east (Darvill 2004: 98) such that in the case of their terminally transepted forms, the 'passage would have been lit from the exterior' (Bradley 1989: 253) whilst the 'side chambers ... would have remained in darkness' (Bradley 1989: 253). In contrast, where the chamber was set laterally within the mound, light would not only recede with movement through the passage, but in those cases where the chamber was itself set at a right angle to the passage – as evidenced at Hazleton North, Ty Isaf and Gwernvale (Darvill 2004: 104) – was prevented from penetrating its internal space (Bradley 1989: 253). For Bradley, this architectural division is seen as not only symbolising the progressive decay and assimilation of the dead into the world of the ancestors – whose collective remains occupied the 'unlit portions of these tombs' (Bradley 1989: 254), but, in reinforcing the 'distinction between the interior and the outer world' (Bradley 1989: 253), these contrasting zones of darkness and light would have themselves been experienced by the living as signifying movement to that world. A similar observation is made by Richards concerning the projecting uprights of the Orcadian stalled cairn for whilst their opposed positioning divides the internal space of the chamber into a series of compartments through which a central passage terminates in a 'massive backslab' (Richards 1992: 73) situated

'directly at the end of the ... tomb' (Richards 1992: 72), this architectural organisation of the chamber can also be read in terms of the way its orthostatic partitioning defines a series of symbolic 'doorways through which a path leads towards the ... gateway to another world' (Richards 1992: 71-72) that was itself closed to the living.

Indeed, this structuring of perception through the architectural representation of movement between different worlds finds its most developed expression in the megalithic art associated with the passage graves of the Brú na Bóinne. Comprising a series of geometric designs distributed through the chamber, passage and retaining kerbstones of their enclosing mounds, this engraved parietal art is seen by Dronfield and Lewis-Williams as reflecting the entoptic imagery associated with the neurological functioning of the brain under altered states of consciousness (Dronfield 1995a: 545-548; Lewis-Williams & Pearce 2005: 47-48, 261-262; Lewis-Williams & Dowson 1993: 55-56, 59). Induced through the sensory manipulation and intraneural stimulation of the nervous system (Dronfield 1995b: 263), these neurologically generated images give the 'visual impression of looking into, or moving through, a vortex or tunnel' (Dronfield 1996: 37) whose spiralling motion connects 'non-coextensive worlds' (Dronfield 1996: 45). It is these mental percepts that are reproduced through the architectural form of these structures as the concentric motifs associated with their passages, as well as the passages themselves, recreate the entoptic imagery associated with the tunnel experiences of subjective vision in an altered state of consciousness (Dronfield 1996: 40-44; Lewis-Williams & Pearce 2005: 268; Lewis-Williams & Dowson 1993: 60). Hence the five spirals and nested arcs covering the outer face of the entrance stone to the passage at Newgrange (Dronfield 1996: 52) and concentric rectangles defining the kerbstones to the eastern and western passages of Knowth (Lewis-Williams & Pearce 2005: 211-212) and the neurological association these entoptic forms have with the vortex as a 'journey between ... alternative worlds' (Dronfield 1996: 52). Similarly, the neurological experience of the vortex as 'coming out of a constricting passage into a widening funnel ... and another existential realm' (Lewis-Williams & Pearce 2005: 218) is itself replicated through the progressive merging of the passage roof with the corbelled vaulting of the

chambers at both Newgrange and Knowth (Lewis-Williams & Pearce 2005: 218), whilst their spiralling cones (Lewis-Williams & Pearce 2005: 266) and the presence of concentric motifs on the basin occupying the northern recess of the eastern chamber at Knowth (Lewis-Williams & Pearce 2005: 222), the orthostats forming the western and northern recesses of the chamber at Newgrange (Dronfield 1996: 53) together with those 'engraved on the underside of the roof slab above ... the ... basins' (Dronfield 1996: 54) of its eastern recess signify the portals through which the dead enter their world (Dronfield 1996: 54). As well as reconstructing the mental percepts of subjective vision, the recovery of the seeds and pollen of black henbane from sherds of Grooved Ware at Balfarg, Fife, together with the probable fourth millennium presence of fungal hallucinogens in the form of ergot, the fly agaric and *psilocybe* mushrooms (Dronfield 1995b: 265, 271) not only suggests that 'hallucinogenic substances of the lysergide group were ... used in ... the production of Irish passage-tomb art' (Dronfield 1995b: 271), but that these structures were themselves directly engaged through the intraneural stimulation of the nervous system such that 'movement of the body in architecturally defined space' (Dronfield 1996: 37) was itself perceptually experienced as 'movement ... of the self' (Dronfield 1996: 37) between 'spatially and conceptually separate ... dimensions of existence' (Dronfield 1996: 52).

This structuring of perception through the architectural regulation of the body also frames the somatic reading of the Dorset Cursus advanced by Bradley and Tilley for whilst its near ten kilometre length would have made 'little sense except to those *inside* it' (Bradley 1991: 56), the visual effects generated by the structure would have only become apparent with movement from its north-eastern terminal on Martin Down (Tilley 1994: 197). Central to this understanding of directionality is the enclosed positioning of the Gussage North long barrow at right angles to its banks on Gussage Cow Down and the relation it has with the initial north-eastern terminal located on the slope of Bottlebush Down for whilst this structure is visible from the cursus as it crosses the summit of the ridge itself, it was only by 'positioning ... the ... terminal ... on ... lower ground ... that the barrow would appear on the horizon' (Bradley 1991: 47). The importance accorded by the terminal to the skylining of this structure is

itself explained through the presence of a solar alignment within the north-eastern to south-western trajectory of the cursus for when viewed from the terminal, the solstitial sun at midwinter would have been seen to have set directly behind the silhouetted form of the long barrow (Ruggles 1999: 127; Tilley 1994: 189; Bradley 1991: 56). A similar somatic effect is generated through the positioning of the Thickthorn Down terminal at its south-western end for, as the cursus ascends its ridge, not only does the terminal suddenly come into view (Tilley 1994: 194) but the increasing scale of its side-banks would have funnelled 'vision ... towards the massively constructed ... cross-bank' (Tilley 1994: 196) – whose shape and orientation resembles that of the 'two barrows associated with and aligned on it' (Tilley 1994: 194). Coupled to the partially hidden Pentridge 19 long barrow, incorporated into the western bank of the structure at the point where the cursus first starts to cut across the contours of the landscape after following the gently undulating terrain from Martin Down (Tilley 1994: 180-183), these features would have had 'little or no ... somatic impact' (Tilley 1994: 197) when approached from the south-west and it is this structuring of perception through the somatic experience of movement from the north-east that the meaning of the structure was rendered apparent to 'those ... *inside the monument*' (Bradley 1991: 58) for in linking, incorporating and imitating the distribution of long barrows on Martin Down, Gussage Cow Down and Thickthorn Down as well as imposing a solar alignment on them through the visibility that the Gussage North long barrow has with both the north-eastern and south-western terminals (Bradley 1991: 47), the cursus is seen by Bradley and Tilley as constructing a linear narrative through which the dead are bound together and made to 'seem part of the unchanging world of nature' (Bradley 1991: 56).

A similar somatic understanding frames the post-processual reading of the West Kennet Avenue. Defined by a series of paired sarsen monoliths set 15 metres apart at intervals of 20 to 30 metres (Pollard & Reynolds 2002: 100), this 2.4 kilometre long structure is seen by post-processualism as prescribing a formalised path of movement to the southern entrance of the henge at Avebury. Descending from Overton Hill – where its south-eastern end terminates in the stone and timber settings of the Sanctuary (Gillings *et al.* 2008: 129) – not only



does the line of its sarsen settings appear to lead towards the Early Neolithic enclosure of Windmill Hill with the West Kennet long barrow visible to the south-west (Watson 2001: 300; Thomas 1999: 214), but the henge itself is 'hidden by a low ridge which rises to the east of the Avenue' (Thomas 1999: 214) such that, rather than being associated with it, the Avenue instead has the somatic effect of a 'route which ... led ... towards an ancient enclosure' (Watson 2001: 300). A similar somatic effect is experienced with movement towards the ridge itself for not only is the 'rise in the land ... matched by a commensurate increase in the height of the avenue stones, accentuating the crest and ... false horizon it created' (Gillings & Pollard 2004: 78) but, as the ridge is crossed, Windmill Hill suddenly reappears – framed between its paired settings (Watson 2001: 300). In referencing the monuments of the past, the Avenue is consequently seen by Thomas as constructing a 'spatial narrative' (Thomas 1999: 217) through which the histories associated with particular places were unified and 'retold ... through the orchestrated movement' (Gillings & Pollard 2004: 82) of the individual within the prescribed space of its linear architecture.

It is this structuring of perception through the formalised engagement of the past that changes with the crossing of the ridge as it is at this point in its trajectory that the enclosing bank of the henge is first rendered visible (Watson 2001: 300; Thomas 1999: 214). As a result the ridge is seen by Watson as marking the point where the 'past ... becomes eclipsed' (Watson 2001: 300) by the experiential framework of the henge itself – whose encircling bank dominates the somatic effect of the Avenue in its final approach to Avebury since it is only when it turns to meet a 'line of four stone pairs running from the southern entrance' (Pollard & Reynolds 2002: 100) that the internal space of the structure first becomes visible (Watson 2001: 300; Thomas 1999: 214). However, rather than affording a clear view of the interior, vision was instead restricted by the spatial positioning of the two 'vast entrance stones of the Outer Circle' (Pollard & Reynolds 2002: 94) which, in conjunction with those forming the inner southern circle, would have created the 'illusion of a solid wall or some kind of building' (Watson 2001: 302) whose sensory negotiation required the adoption of a 'sinuous route into the henge' (Pollard & Reynolds 2002: 86). Similarly, on passing through the outer circle, a full view of the central settings, as well as

movement to them, was again impeded by the sarsen uprights of the inner northern and southern circles (Pollard & Reynolds 2002: 94; Thomas 1999: 215-216) whilst, within these spaces, the 'façade-like linear setting adjacent to the Obelisk and the box-like structure of the Cove further restricted visual access to the deepest spaces of the henge' (Gillings & Pollard 2004: 63). As well as controlling movement and vision, the acoustic properties associated with the circular architecture of the henge are also seen as affecting the degree of audibility within it, for whilst the enclosing bank of the structure would have contained any generation of sound produced within it, the form of its transmission would have differed across the internal space of the enclosure. This is particularly evident when considering the production of echo for not only are 'circular arrangements of stones ... tremendously effective at creating echoes' (Watson 2001: 308), but the 'markedly larger and wider ... stones' (Pollard & Reynolds 2002: 86) of the two inner circles were 'particularly ... suited to the reflection of sound' (Watson 2001: 308). Thus, whilst sounds generated from within these spaces would have been 'reflected simultaneously from all sides of the circle ... returning as a coherent echo' (Watson 2001: 308), beyond these spaces the same echoes would have become 'increasingly indistinct and directional as the sounds are moving various distances across the interior' (Watson 2001: 308) of the enclosure. As a result, the 'centres of these circles would have been major acoustic focuses' (Watson 2001: 308) such that, as with the settings they enclose, the internal architecture of the henge is seen by post-processualism as establishing a series of graded spaces through which the meanings associated with the structure were progressively revealed through the sensory regulation of the body as it crossed the 'spatial hierarchy' (Gillings & Pollard 2004: 63) of the interior.

A similar understanding concerns the megadendric circles of the Late Neolithic. Thus, at the Sanctuary itself, an outer stone circle [ring A] enclosing six concentric rings of timbered posts [rings B-G] was bonded into the south-eastern end of the West Kennet Avenue with a second inner circle of stone set between the timbered uprights of ring C (Gillings & Pollard 2004: 78-79). The overall configuration of these settings is seen by Pollard as defining a central circular area from which cruciform corridors radiate as a 'division of the rings

along an axis drawn between the entrance post-holes ... of ring B and ... another ... through the centre at right-angles to this, divides the structure into four symmetrical sections with equally spaced aisles' (Pollard 1992: 215). However, rather than providing equal routes of movement through the structure, the positioning of the timbered uprights forming ring G effectively blocked 'direct access into the centre ... from the north-west and south-east corridors' (Pollard 1992: 215). As a result, the inner space of the structure could only be accessed by a 'pattern of movement that was both radial and linear' (Pollard 1992: 223) in form. As well as prescribing 'movement ... along the corridors ... and ... rings of posts' (Pollard 1992: 223) defining the structure, the spatial configuration of its timbered settings are also seen as controlling vision within it, for not only was a full view of the centre impeded by the uprights forming rings D-G, but on entering the space between rings A and B, the centre itself would have been screened by the integrated settings of ring C (Bradley 2007: 124).

Replicating this spatial control of movement and vision is the analogous Site IV at Mount Pleasant, Dorset. Here, five concentric rings of timbered posts [rings A-E] defining a central circular area with squared sarsen settings was structured 'around four corridors laid out at right angles to one another' (Bradley 2007: 124). However, as with the Sanctuary, rather than providing equal routes of movement through the structure, access to its central area was instead blocked by the location of those sarsen uprights positioned beyond the timbered settings of the northern and eastern corridors, whilst the spatial positioning of post 164, in ring E, denied a similar pattern of movement through the southern corridor (Pollard 1992: 224). Similarly, on entering the space between ring A and its enclosing panannular ditch, not only was access to the northern and western corridors restricted by the spatial positioning of further sarsen uprights between rings A and B, but the eastern corridor was itself impeded by the post settings of ring A (Pollard 1992: 224). As a result, the spatial configuration of the structure is seen by Pollard as prescribing a circular path of movement through its rings to the inner section of the western corridor – from where its central space could be directly accessed (Pollard 1992: 224), whilst its squared sarsen settings would have simultaneously 'functioned as barriers screening the centre from view' (Bradley 2007: 124). Likewise, at Woodhenge, Wiltshire, six concentric

rings of timbered posts [A-F] enclosed within a penannular ditch are seen by Pollard and Thomas as inscribing a circumferential pattern of movement through the outer post-settings 43, 44 and 23, 24 of rings A and B and the four metre wide corridor formed by rings B and C (Pollard 1995: 151-152; Thomas 1999: 58), whilst, at the adjacent site of Durrington Walls, the six concentric rings of timbered posts defining the Southern Circle are not only regarded by Thomas as imposing a pattern of movement that progressed from the 'entrance ... to the centre in a spiral' (Thomas 2005: 71) through the paired settings 22 and 23, 66 and 67, 85 and 86, 95 and 96 of rings A-D and the spatially enlarged corridor running between rings D and E (Thomas 1999: 58), but – as with Woodhenge – on moving through the structure itself the density of its timbered settings would have similarly obscured a clear view of the interior (Lawson 2007: 85).

Accompanying this control over movement and vision are the related practices of structured deposition characterising these sites for whilst 'associated with large quantities of Grooved Ware, animal bone and worked flint' (Gillings & Pollard 2004: 58), their 'spatial patterning and compositional relationships shows a high degree of purposeful, symbolic structuring to their placement' (Gillings & Pollard 2004: 70). Thus, at the Sanctuary, not only was 'flint, bone and pottery ... distributed unevenly throughout the post ... holes' (Pollard 1992: 219), but specific 'importance seems to have been attached to ... the northern and eastern sectors ... with a particular emphasis on rings C and D' (Pollard 1992: 222). Likewise, at Mount Pleasant, whilst the main enclosing ditch of the henge contained undecorated forms of Grooved Ware and the bones of pig, at Site IV not only were the bones of cattle and more complex forms of Grooved Ware predominant, but their spatial distribution tended to emphasise the north-eastern and south-western quadrants of the structure (Bradley 2000: 126; Thomas 1999: 82). A similar spatial patterning is exhibited at Woodhenge for whilst the 'remains of wild ... cattle and pig were found ... in the ditch' (Pollard 1995: 152), those of their domesticated counterparts were respectively restricted to rings D-F and A-C (Pollard 1995: 149). Similar spatial contrasts define the distribution of pottery, lithics and other worked objects, for whilst the ditch contained transverse arrowheads, scrapers and worked bone (Pollard

1995: 143), the main concentrations of Grooved Ware and carved chalk were not only associated with the post settings of ring C, but emphasised the eastern quadrants of the structure (Pollard 1995: 147-148). Likewise, at Durrington Walls, whilst the remains of wild pig and cattle were concentrated in the outer ditch of the henge (Richards & Thomas 1984: 214) not only were their domesticated variants equally represented on the chalk and gravel Platform fronting the entrance to the Southern Circle (Richards & Thomas 1984: 206-207) but, within the structure itself, the faunal assemblage was dominated by the bones of pig (Richards & Thomas 1984: 207). Similarly, whilst the most stylistically developed forms of Grooved Ware and specialised lithics were concentrated around the Platform and entrance to the structure (Richards & Thomas 1984: 197), within its settings not only were the distributions of pottery and worked flint mutually exclusive, but the relative densities of each declined with movement to the centre (Richards & Thomas 1984: 204).

For post-processualism the significance of these depositional practices is contained in the understanding they give of how the Neolithic conceived its relation with the natural world for whilst the assemblages defining the periphery of these structures are associated with the wild, those of the interior are instead seen as denoting the subjugation and transformation of its elements consequent upon their incorporation into the social. As a result, movement through these structures is experienced as movement between the unsocialised and socialised worlds, and it is this structuring of perception through the conceptual divisions that domestication establishes between those forms of the wild that are 'inside ... society and ... those ... outside' (Richards & Thomas 1984: 214) that explains the correlation between depositional activity and the formalised patterns of movement characterising the concentric architecture of these structures, for not only does the spatial organisation of their assemblages suggest that they were intended to be 'encountered in a set order' (Bradley 2000: 126) but, through the sequential engagement of those meanings embedded within the compositional relationships of their 'orchestrated connotative geography' (Pollard 1995: 152), a narrative is simultaneously formed concerning the processes by which the 'world came into being' (Bradley 2000: 127).

Indeed, rather than being confined to the Late Neolithic, the presence of these spatial patternings also frames the post-processual reading of the Early Neolithic causewayed enclosure at Windmill Hill, for whilst the depositional practices characterising the 'outer circuit could be seen to present aspects of nature ... and the unsocialised' (Whittle & Pollard 1998: 242) in the form of scrapers, axe fragments, unworked antler and the infant dead (Whittle *et al.* 1999: 370-371; Whittle & Pollard 1999: 387; 1998: 241), those of the middle and inner circuits instead 'stress the domestic ... socialised ... spheres' (Whittle & Pollard 1998: 242), as it is here that the main concentrations of processed cattle bone, pottery and worked flint were located (Whittle *et al.* 1999: 370-371; Whittle & Pollard 1999: 387; Whittle & Pollard 1998: 241). As a result, on moving through those zones of transition and transformation formed by the spaces between its segmented ditch circuits to the central area of the structure and the accompanying evidence it has for occupation spreads in the form of 'middens ... and ... concentrations of charcoal' (Whittle & Pollard 1998: 237), the compositional relationships defining these depositional patterns are consequently seen by post-processualism as structuring perception through the spatial elaboration of a foundational narrative whose successive stages were concerned with 'history ... origins and ... the place of people in the world' (Bradley 2000: 127).

This structuring of perception through the relations domestication establishes between the natural and social worlds also frames the reading, advanced by Richards, of the *domus* as a conceptual framework for understanding the 'spatial imagery of late Neolithic architecture' (Richards 1996: 193) in Orkney. Central to this reading is the underlying consistency in spatial order exhibited by the domestic structures of Barnhouse, Rinyo and Skara Brae for, in each case, their opposed rectangular side recesses, recessed rear shelving and doorways adopt a cruciform design centred upon a squared central hearth (Downes & Richards 2005: 57-58; Parker Pearson & Richards 1994: 41; Richards 1990: 113-114). The centrality accorded to the hearth by the spatial configuration of these elements not only suggests that the 'hearth was always the primary element of ... construction' (Downes & Richards 2005: 125), but that its setting determined the 'internal organisation ... and ... orientation of the dwelling'

(Parker Pearson & Richards 1994: 42) as an 'examination of the entrance orientation of houses at ... Barnhouse, Skara Brae and Rinyo reveals that 80 per cent lie on a north-west/south-east axis' (Parker Pearson & Richards 1994: 46). As a result not only does the hearth face the four Neolithic cardinal directions of the midsummer and midwinter sunrise and sunset but, because its sides will 'always relate to the four architectural elements of the ... interior' (Downes & Richards 2005: 58), their cruciform arrangement acts as a spatial referent for key moments in the solar cycle (Downes & Richards 2005: 126; Parker Pearson & Richards 1994: 45-46; Richards 1990: 120).

As well as determining the spatial order of these structures, the centrality accorded to the hearth by the recurrent positioning of these elements is also seen by Richards as conveying its symbolic importance as an *axis mundi* for whilst its provision of heat and light was critical to the maintenance of life itself, it was through the medium of fire that the wild was simultaneously transformed and brought into the social (Downes & Richards 2005: 125; Parker Pearson & Richards 1994: 41; Richards 1990: 116). Hence the high level of phosphates recovered from the vicinity of the hearths at Barnhouse and the indications these give for the use of fire in the subjugation of the natural world through its transformation of the raw by cooking and the hardening of clay in ceramic production (Jones & Richards 2005: 197). Similarly, when coupled to the asymmetrical positioning of the entrance (Downes & Richards 2005: 126; Parker Pearson & Richards 1994: 42), the restricted space established by the hearth in relation to its surrounding cruciform elements (Richards 1991: 27) not only suggests that movement was concentrically organised around the hearth as a dominant focal point (Downes & Richards 2005: 125), but was temporally imbued by the alignments emanating from it for whilst the 'entrance and right-hand recess ... equates to the winter and summer *sunrises* respectively ... the rear dresser and left-hand recess ... equates with the midsummer and midwinter *sunsets* respectively' (Downes & Richards 2005: 127) such that, on 'passing through the entrance and moving around the interior in an anticlockwise direction' (Downes & Richards 2005: 127), a temporal shift is actuated whose spatial representation 'mirrors the daily cycle (from sunrise to

sunset), the annual cycle (from midwinter to midsummer to midwinter) and ... the ... life cycle (sunrise:birth-sunset:death)' (Downes & Richards 2005: 127).

Indeed, rather than being confined to individual structures, this structuring of spatial order through underlying principles of concentricity and centrality is itself replicated at the wider settlement level. Thus, at Barnhouse, the individual structures forming the settlement were themselves arranged concentrically around an open central area containing evidence of transformation in the form of cooking, secondary flint flaking, pottery and bone tool production (Jones & Richards 2005: 197-198; Garrow *et al.* 2005: 250; Parker Pearson & Richards 1994: 45). As a result, not only can the 'central area ... be seen as a homology of the hearth at a broader settlement scale' (Jones & Richards 2005: 198) but, through the structuring of movement around those practices 'associated with fire and the transformation of material ... through burning' (Jones & Richards 2005: 198), the hearth was simultaneously recreated as the 'centre of people's worlds at the level of the ... village' (Jones & Richards 2005: 198).

For Richards, underpinning these principles of concentricity and centrality were wider frameworks of cosmological meaning concerning the nature of the Neolithic world and the position of the individual within it. It is this that explains the centrality and symbolism of the hearth since it was through its practices of transformation that the social was not only differentiated from the wild, but the form of its relations to it, were understood. As a result, the hearth not only represents the interface of the natural and social worlds, but the subordination of the wild to it and it is this subjugation of the natural world through the social practices of domestication that is not only referenced architecturally through the foundational primacy of the hearth as a constructional element (Downes & Richards 2005: 125), but explains the subsequent 'practice of leaving the hearth ... *in situ*' (Jones & Richards 2005: 198) following abandonment. Similarly, it is the dependence of the social on the natural world that explains the temporal symbolism embedded within the concentric organisation of space defining these structures for whilst their cruciform elements reference the turning points of the sun in its movement through the solar cycle, they also map the key points in the agricultural cycle and the social practices associated with it (Downes &



Richards 2005: 58; Parker Pearson & Richards 1994: 46-47; Richards 1990: 120). As a result, the annual cycle is fused with the solar cycle and it is this interrelationship between the social and the natural worlds that is not only conveyed through the architectural symbolism of these structures, but explains the transposition of their ordering principles to the 'different social domains' (Jones & Richards 2005: 198) of Maes Howe and the Stones of Stenness.

Thus, at Maes Howe, not only does the chamber replicate the cruciform spatial structure of Barnhouse, Skara Brae and Rinyo through its connecting passage and recessed side cells, but, given its association as a 'residence of the dead' (Garrow *et al.* 2005: 252), the central hearth is absent (Jones & Richards 2005: 198; Richards 1996: 196). Instead, its place is taken by the solstitial alignment of the passage – whose penetration of light from the 'setting sun of the shortest day' (Challands *et al.* 2005a: 246) is seen by Richards as 'involving union with the ancestors' (Garrow *et al.* 2005: 253) in rites associated with the reproduction of the annual cycle and the continuing dependence of the living on it (Challands *et al.* 2005a: 246; Garrow *et al.* 2005: 252-253). The 'single entrance ... circular boundary and ... central hearth' (Challands *et al.* 2005b: 222) defining the Stones of Stenness is similarly seen by Richards as drawing 'heavily on the spatial ... imagery of the house' (Challands *et al.* 2005b: 222). However, in contrast to Maes Howe, the presence of 'sherds of thin-walled Grooved ware ... together with fragments of burnt animal bone in the hearth ash' (Challands *et al.* 2005b: 223) not only points to the primacy of the hearth as a dominant focal point within the concentric organisation of the structure (Challands *et al.* 2005b: 223) but, given the intensity of heat and light that would have been generated by the 'large pieces of cramp ... present within the ash' (Challands *et al.* 2005b: 224) – which, at 'night ... would have ... illuminated the interior of the monument' (Challands *et al.* 2005b: 224) – suggests its centrality in the ritual interventions of the living at the 'beginning of a new cycle of regeneration' (Parker Pearson & Richards 1994: 47). In each case, the same principles of order are 'mirrored in the architecture of house, tomb and henge' (Garrow *et al.* 2005: 251) and it is this shared imagery, resulting from the concentric organisation of space within these structures, that is seen by Richards as reflecting wider frameworks of cosmological understanding

concerning the 'perceived order of the world' (Garrow *et al.* 2005: 251) since it is through the lived experience of domestication and the relations it establishes with the wild that both the quotidian rhythms of the social and their cyclical renewal through the natural were rendered culturally intelligible.

A similar understanding is advanced by Parker Pearson concerning the spatially differentiated use of timber and stone in the solar cosmologies of the Stonehenge landscape. Informing this understanding are the opposed architectural similarities of Stonehenge itself and the Southern Circle at Durrington Walls, some three kilometres to the north-east, for whilst the 'sarsen and bluestone settings at Stonehenge have much the same diameters as the four inner rings at Durrington' (Thomas 2005: 77) and enclose an 'inner space of ... much the same size' (Thomas 2005: 77), the Southern Circle was constructed from wood rather than stone. Similarly, whilst the oval plan of the inner section of the Southern Circle replicates the north-east to south-west axis of Stonehenge (Parker Pearson *et al.* 2007: 630-631; Parker Pearson *et al.* 2006: 3), the positioning of its entrance on the south-eastern side of the structure meant that the circle was 'aligned ... on the midwinter' (Parker Pearson *et al.* 2007: 630) rather than the midsummer sunrise. Reproducing these opposed solstitial alignments are the accompanying avenues linking each structure with the River Avon, for whilst the avenue at Durrington approaches the Southern Circle in the 'direction of ... midsummer sunset' (Parker Pearson *et al.* 2005: 5), Stonehenge is approached in the 'direction of the midwinter sunset' (Parker Pearson *et al.* 2005: 5). Similarly, whilst both avenues exhibit a comparable width of some thirty metres (Parker Pearson *et al.* 2007: 631) and the location of a pit along the line of the Durrington Walls avenue suggests the presence of a 'large ... timber post, at about the same distance to the Southern Circle as the Heel Stone is to Stonehenge' (Parker Pearson *et al.* 2005: 4), their architectural form differs in that, at Stonehenge, the delineating arrangement of an inner ditch and outer bank is reversed (Parker Pearson *et al.* 2005: 4).

For Parker Pearson, the opposed architectural imagery of these similarities suggests that both structures were 'designed and built as a single development' (Parker Pearson *et al.* 2007: 636). Supporting this interpretation is the revised

dating of the sarsen phase at Stonehenge following rejection of the two radiocarbon determinations on antler pick recovered from a pit identified by Atkinson as the erection ramp for stone 56 of the central trilithon (Parker Pearson *et al.* 2007: 623-626; Parker Pearson *et al.* 2006: 10). Combined with the two determinations on antler pick derived from the sockets of stone 1 in the outer circle and trilithon stone 53 and 54, these conventionally date the sarsen phase of Stonehenge to 'c. 2400-2200 BC' (Parker Pearson *et al.* 2006: 10). However, rather than being associated with the central trilithon, this ramp not only fails to fully engage the socket of its north-western upright, but the absence of any packing stones on its north-eastern side suggests that it was dug after its erection as the chalk-fill on which its accompanying bluestones were set extended to the base of the trilithon. As a result, the two radiocarbon determinations emanating from this fill are seen by Parker Pearson as contextually unreliable and their elimination from the dating of the sarsen phase at Stonehenge gives revised 'estimates for the construction of the sarsen circle of 2580-2470 cal BC ... and ... the sarsen trilithons of 2600-2400 cal BC' (Parker Pearson *et al.* 2007: 626) – thereby placing the 'sarsen phase ... in the period 2640-2480 BC' (Parker Pearson *et al.* 2006: 10). For Parker Pearson, this revised dating is 'statistically indistinguishable' (Parker Pearson *et al.* 2007: 636) from that relating to the two radiocarbon determinations on antler pick and pig bone recently recovered from the excavations of the Stonehenge Riverside Project at Durrington Walls – whose respective ranges of '2570-2350 cal BC' (Parker Pearson *et al.* 2007: 631) and '2830-2470 cal BC' (Parker Pearson *et al.* 2007: 633) suggest the probability that 'Durrington Walls was constructed and used at exactly the same time as the sarsen phase at Stonehenge' (Parker Pearson *et al.* 2007: 636).

It is this contemporaneity in the dating of these structures that allows a reading of the landscape through the wider frameworks of cosmological meaning embedded within it as the River Avon is seen by Parker Pearson as facilitating an integrated pattern of movement between 'Durrington Walls downstream to Stonehenge at the midwinter solstice and upstream from Stonehenge to Durrington Walls on midsummer's day' (Parker Pearson *et al.* 2005: 5). The changing directionality inherent within this pattern of movement not only

suggests the cultural significance of the solstices as key moments in the solar cycle, but explains the opposed materialities of these structures, for whilst the softness and perishability of wood is seen by Parker Pearson as a symbol for the living, the hardness and durability of stone is instead viewed as a medium for the dead (Parker Pearson & Ramilisonina 1998: 310-311; Parker Pearson 2000: 203). As a result, whilst the downstream movement from timber to stone is 'interpreted as leading ... the living into the realm of the ancestors' (Parker Pearson *et al.* 2005: 5), the upstream movement from stone to timber 'leads ... the ancestors to the living' (Parker Pearson *et al.* 2005: 5). In each case not only are the ancestors aligned with the movement of the sun, but invoked in the interventions of the living at its critical turning points since it was through those practices associated with the ritual securement of its return and subsequent renewal of the earth that the continuing reproduction of the social through the natural world was culturally assured – as suggested by the presence of a 'naturally formed, vulva-shaped pit' (Parker Pearson 2005: 30) containing a 'modified flint nodule phallus' (Parker Pearson 2005: 30) along the line of the gully delineating the avenue in its approach to the Southern Circle at Durrington Walls.

It is this cultural understanding of the lived and experienced world that not only explains the 'differentiated but integrated purpose' (Parker Pearson *et al.* 2007: 637) of these structures, but the contrasting assemblages associated with them, for whilst the presence of burnt bone in the Aubrey Holes and the enclosing bank and ditch at Stonehenge points to its use as a cremation cemetery prior to the commencement of its first stone phase (Parker Pearson & Ramilisonina 1998: 314; Parker Pearson 2000: 204), there is a 'near absence of human remains' (Parker Pearson *et al.* 2007: 636) at Durrington Walls. Similarly, in contrast to the 11 sherds of Grooved Ware and 1000 animal bones – predominantly cattle – recovered from Stonehenge, the Durrington Walls assemblage contained 5861 sherds of Grooved Ware and 8500 animal bones – consisting predominantly of pig (Parker Pearson *et al.* 2007: 636; Parker Pearson & Ramilisonina 1998: 316). The condition of these bones also indicates that the 'entire potential calorific content of the animals concerned was not being exploited' (Richards & Thomas 1984: 206) as the limited evidence for

butchery in the form of scrape marks and the splitting of bone for marrow combined with the many unfused epiphyses that were still in place suggests the 'relatively minimal utilisation of the bones beyond the removal of meat from them' (Richards & Thomas 1984: 206). Coupled to the 'small quantities of stone tools ... the absence of grinding querns and the lack of carbonised grain in flotation samples' (Parker Pearson *et al.* 2006: 10) recovered from the extensive areas of Neolithic ground surface recently found on either side of its avenue, these assemblages not only point to the seasonal use of Durrington Walls as a 'consumer site' (Parker Pearson *et al.* 2006: 10) at 'important ... moments in the annual calendar' (Parker Pearson *et al.* 2005: 5) but, given the accompanying evidence for the 'culling of pigs in winter' (Parker Pearson *et al.* 2006: 10), suggests that it was the midwinter rather than the midsummer solstice that was of prime ritual significance.

## 5.2 The individual, the social and the Neolithic.

Underlying these approaches is the conceptual framework of the individual for in contrast to the modernist conception of 'monuments as social phenomena, bound up with the internal dynamics of small-scale societies' (Thomas 1990: 168), the significance of these structures is instead seen to reside in the understanding they give of the Neolithic in terms of the 'otherness or ... strangeness' (Fleming 2006: 269) of its lived existence. As a result, rather than reading these structures economically, they are instead read culturally since it is through the recovery of those meanings embedded within their locations, appearance and constructional elements that both the distinctiveness of the Neolithic and the relations it has with the natural world are rendered accessible to knowledge. Whilst this movement to an interpretative reading of these structures has clearly advanced archaeological understanding of the Neolithic through its attempt to get closer to the 'mind-sets ... of the ... past than ... previously ... attempted' (Fleming 2006: 271), it also, however, has the theoretically limiting effect of decontextualising the individual for in emphasising the subjective conditions of its lived existence, the social is simultaneously reduced to and read through the conceptual framework of the individual.

It is these theoretically limiting effects that are consistently demonstrated through the post-processual reading of these structures for whilst their forms of engagement are seen as indicating wider processes of differentiation, these remain divorced from any understanding of social organisation. Instead, such organisation is implied through the differential positioning of the individual within the contrasting experiential frameworks generated by the architectural division of space within these structures. It is these contrasting experiential frameworks that, for post-processualism, the projecting horns and megalithic façades defining the forecourts to the chambered long mounds and cairns of the Early Neolithic articulate, for not only do their open spaces delineate a sphere of ritual participation whose scope exceeds that afforded by the restricted size of their chambers (Cummings 2008: 142; Darvill 2004: 136) but, through the emphasis their ascending heights accord to the entrances of these structures, establish a 'graded field of knowledge' (Thomas 1999: 214) through which those individuals permitted access to the chamber are simultaneously differentiated. It is this 'socially restricted knowledge' (Thomas 1999: 204) that is not only visually shielded from the forecourts of these structures, but also the audible transmission of those sounds associated with its practices – as suggested by the recovery of an 'end-blown flute ... made from the metapodial of a sheep in the entrance to the northeast ... chamber at Penywyrlod' (Darvill 2004: 136) – for whilst those inside the chamber would 'hear sounds enhanced by echoes' (Watson & Keating 1999: 335) consequent upon the amplified reflection of those sound waves generated from within its enclosed space (Watson & Keating 1999: 328), those outside would, by contrast, 'only hear a filtered rendition' (Watson & Keating 1999: 329) as the same sound waves have to pass through the more restricted airspace formed by the overlying material of its enveloping mound or cairn (Watson & Keating 1999: 328). As a result, not only do the experiential frameworks of the individual differ according to their position relative to the chamber, but also the understanding they have of its practices as the meanings associated with these structures was itself dependent upon 'whether a person ... took part in ritual activities in the forecourt, or was granted access to the ... interior' (Thomas 1999: 214).

The same principles of exclusion define the passage graves of the Early Neolithic, for not only is the chamber separated from the indented forecourts of these structures by means of a narrow connecting passage, but the capacity of their architectural form to generate Helmholtz Resonance (Watson & Keating 1999: 331) suggests that their acoustic effects could also 'serve to differentiate between people who were permitted access and those who were not' (Watson & Keating 1999: 335). Here, when sound waves are produced at a specific infrasonic frequency 'determined by the relative volumes of the chamber and passage' (Watson & Keating 1999: 331), the 'movement of air within the structure' (Watson & Keating 1999: 332) starts to oscillate as the expansion of air from sound waves generated within the chamber not only causes it to push against the 'mass of air confined within the narrow passageway ... moving it towards the entrance' (Watson & Keating 1999: 331), but to also 'retract back towards the chamber' (Watson & Keating 1999: 331) as this outward motion is itself countered by the 'elastic properties of the air' (Watson & Keating 1999: 331) within the passage. Resonance occurs when this 'oscillation becomes synchronized with the pressure waves emitted by the sound source, causing these waves to increase in amplitude' (Watson & Keating 1999: 331) such that the 'resulting sound becomes multiplied until it is greater than the original output' (Watson & Keating 1999: 331). It is the physiological effects generated by these infrasonic resonances that, for Watson & Keating, differentiate the experiential frameworks of those inside the chamber, for whilst exposure to their frequencies can 'contribute to the inducement of altered states of consciousness' (Watson & Keating 1999: 334), such psychoactive response and the association it has with the meaning and practices of the chamber was necessarily precluded to those whose level of participation was confined to the external spaces of these structures.

It is this controlled access to the experiential frameworks of the chamber that is similarly conveyed through the solar alignments and megalithic art associated with these structures for whilst, at Newgrange, the rising sun of the midwinter solstice would have illuminated the decorated kerbstone fronting its entrance, its penetration of the chamber and interplay with the carved designs of the interior would have been confined to those permitted entry to its restricted space

(Bradley 2007: 103-104; 1998a: 103-104; Cooney 2000: 157). The same principles of exclusion define the equinoctial alignment of the passages at the neighbouring structure of Knowth and the relations these establish between the rising sun and the carved designs positioned around the northern recess of the eastern chamber (Cunliffe 2001: 179; Ruggles 1999: 129). Likewise, at Loughcrew, County Meath, a 'decorated stone at the back of the final chamber' (Bradley 1989: 255) of Cairn T had been 'carefully located so that it could be lit by the equinoctial sunrise' (Bradley 1989: 255). Similarly, where such designs embellish the kerbstones surrounding these structures – as evidenced at the Brú na Bóinne – their form differs to those of the interior (Bradley 2007: 104), thereby suggesting that their 'full import ... as a system of signification would be restricted to those granted access to the ... chambers' (Thomas 1993a: 88) for whilst those confined to the external spaces of these structures would derive an understanding of the chamber in terms of the meanings associated with the sun and the carved designs fronting their entrances, it was only through the solar penetration of their connecting passages that the significance of these designs for the practices of the chamber acquired their full meaning.

Similar processes of differentiation define the circular architecture of the Late Neolithic for whilst their enclosed spaces could accommodate a wider social grouping than that afforded by the mortuary structures of the Early Neolithic, their internal settings are also seen by post-processualism as dividing the 'naturally undifferentiated ... area of these sites into a series of spaces' (Harding 2003: 69) through which the access and control of knowledge was regulated. It is this control of 'esoteric knowledge' (Gillings & Pollard 2004: 62) that the contrasting experiential frameworks generated by the inner and outer circles at Avebury demonstrate, for whilst those approaching the structure would have had their vision of the centre obstructed by the density of the sarsen settings occupying its internal space (Gillings & Pollard 2004: 63; Pollard & Reynolds 2002: 94; Watson 2001: 302; Thomas 1999: 215), those entering the intermediate space between these settings would continue to have their vision impeded by the monoliths of the two inner circles (Pollard & Reynolds 2002: 94; Thomas 1999: 215-216). It was only with movement to the deep space of these inner settings that the central foci of the structure were rendered visually



accessible and even here knowledge of the practices associated with their spaces continued to remain restricted, for not only did the linear setting of small standing stones adjacent to the Obelisk establish a '26-metre-long facade or screen' (Barrett 1994: 17) behind which a 'back space of potential secrecy' (Barrett 1994: 18) was created, but the open rectangular setting forming the '44 square metres of the Cove' (Thomas 1999: 216) similarly 'restricted visual access' (Gillings & Pollard 2004: 63) to the activities associated with its inner space. Accompanying this control of vision in the experiential frameworks of the structure was the movement of sound through its hierarchically graded spaces for whilst the generation of sound waves within the two inner circles would have created echoes consequent upon their reverberation against the broad faces of their enclosing monoliths (Watson 2001: 308), the same settings would have also filtered the transmission of sound to the outer circle. Similarly, within the inner northern circle itself, whilst the 'three large monoliths of the Cove would screen the movement of sound in some directions' (Watson 2001: 308), it would have also projected its transmission 'outwards through its open side' (Watson 2001: 308). As with the restrictions imposed on vision, the audible perception of those practices associated with the deepest spaces of the structure was consequently dependent upon the positioning of the individual relative to these settings and the rights of access these confer to 'particular bodies of esoteric knowledge' (Pollard & Reynolds 2002: 95) whose forms of differentiated understanding reflected the contrasting experiential frameworks of their increasingly confined spaces.

Replicating this 'differential access to knowledge' (Thomas 1999: 216) is the final form of the sarsen and bluestone settings at Stonehenge, for whilst the outer sarsen circle exhibits a diameter of 'about 30m' (Walker & Gardiner 1995: 26) enclosed within its space was the inner horseshoe configuration of sarsen trilithons and bluestones – symmetrically arranged around the solstitial alignment of the structure and open to the north-east. Through this spatial configuration, a 'series of barriers' (Bradley 2007: 141) are created limiting access to the experiential frameworks of the centre, for whilst those positioned at its north-eastern entrance would have had their visual knowledge of the practices associated with the solar penetration of the 'relatively small area

defined by the trilithons and ... Bluestone horseshoe' (Barrett 1994: 43-45) restricted by the evenly spaced settings of the outer sarsen circle – whose intervallic range of 1 to 1.4 metres (Walker & Gardiner 1995: 26) causes them to appear as a 'screen of standing stones ... linked by an unbroken line of lintels' (Barrett 1994: 43), those occupying the intermediate space of the structure would have continued to have their visual perception impeded by the spacing of the inner trilithons. As well as regulating vision, the close-set stones of the outer sarsen circle would have also 'influenced the distribution of sound' (Watson & Keating 1999: 335) through the structure for, in creating an 'almost continuous wall around the central area' (Watson & Keating 1999: 335), their dressed surfaces would not only have 'reverberated sound around the interior' (Watson & Keating 1999: 335), but 'interrupted or distorted the transmission of sound between the centre and the outside world' (Watson & Keating 1999: 335). Likewise, at the Stones of Stenness, a spatially graded field of knowledge is similarly established through the dominant focal point of its centrally placed hearth, for whilst the broad surfaces of the monoliths defining the perimeter of the structure would 'screen visual ... activity ... from the outside world' (Watson & Keating 2000: 260), they would also have contained the movement of sound within it as 'sounds generated inside the circle were reflected back towards ... the centre' (Watson & Keating 2000: 259). Whilst the resultant echoes produced by this movement would have become 'increasingly ordered' (Watson & Keating 2000: 259) with proximity to the hearth, in other parts of the interior they would have become chaotic as 'sound has to travel different distances between individual stones' (Watson & Keating 2000: 259) rather than returning simultaneously. As a result, as with Stonehenge, both the visual and audible perception of those practices associated with the deep space of the hearth were consequently dependent upon the relative positioning of the individual within the contrasting experiential frameworks generated by the architectural form of the structure and the controlled access these gave to the meanings defining its enclosed space.

The same principles of differentiation define the megadendric structures of the Late Neolithic. Thus, at the Sanctuary, the architectural configuration of its multiple concentric settings is seen by post-processualism as creating a 'series

of ... spaces' (Pollard & Reynolds 2002: 108) through which access to particular 'bodies of esoteric knowledge' (Pollard & Reynolds 2002: 108) were controlled and regulated, for whilst those confined to the periphery of the structure would have had their visual perception of the practices associated with the 'small open space ... at the centre' (Barrett 1994: 15) obstructed by the 'confusing mass of posts' (Pollard & Reynolds 2002: 108) appearing behind the combined timbered and sarsen settings of its second outer circle, those positioned within the 'access lines' (Barrett 1994: 15) of the structure would have continued to have their visual knowledge impeded by the density of the settings surrounding them. A similar 'denial of visual access ... and ... evaluation ... of the activities taking place within the centres' (Pollard 1992: 223-224) of these structures is exhibited at Site IV, Mount Pleasant, whilst at both Woodhenge and the Southern Circle at Durrington Walls, perception of the practices associated with their inner spaces 'would have been obscured' (Lawson 2007: 85) by the spatial failure of their concentric settings to establish clear lines of radial sight through each structure. As with their megalithic counterparts, the spatial configuration of these structures is consequently seen by post-processualism as generating a series of contrasting experiential frameworks through which knowledge of the practices and meaning of their deep space was controlled and regulated.

It is this controlled access to knowledge that, for post-processualism, is seen as implying some form of social differentiation within the Neolithic centred upon the capacity of those empowered with the practices of their enclosed spaces to define both the meaning of these structures and the form of its reading through the contrasting experiential frameworks of their surrounding architecture (Cummings 2008: 147). It is these asymmetrical relations of power that are not only expressed through the spatial separation of the chamber within the mortuary structures of the Early Neolithic, but also through the linear approaches formed by the Beckhampton and West Kennet Avenues to the circular architecture at Avebury. In prescribing formalised patterns of movement through the landscape, the paired uprights defining the course of these structures are seen by Barrett as denoting processional ways whose constricted widths 'established an order' (Barrett 1994: 17) between 'those who were led and those who followed' (Barrett 1994: 15). It is this processional

order that is reproduced through the differential positioning of the individual within the contrasting experiential frameworks of the inner and outer circles at Avebury, for whilst those leading the approach would occupy the deep space of the structure and have their 'presence amplified' (Barrett 1994: 17) by the stage-like form of the Cove and megalithic façade accompanying the Obelisk (Barrett 1994: 17), those occupying the outer spaces of these settings would not only have 'simply stood and watched' (Barrett 1994: 18), but internalised the transmission of those meanings generated by a 'relatively isolated elect' (Barrett 1994: 15) – whose privileged 'situation ... upon the central ridge within Avebury' (Watson 2001: 306) enabled them to view the 'entire interior of the henge' (Watson 2001: 306). Indeed, overseeing the reproduction of these meanings was the skylined presencing of a 'ceremonial ... elite' (Barrett 1994: 31), for not only was the 'elevated platform' (Barrett 1994: 31) formed by the conical mound of Silbury Hill intervisible with the 'zone contained by the Inner Circles' (Watson 2001: 306) but so, too, was both the south-western terminal of the Beckhampton Avenue (Pollard & Reynolds 2002: 119) and the descent of the West Kennet Avenue from its south-eastern terminal with the Sanctuary on Overton Hill (Thomas 1999: 214).

A similar asymmetrical structuring of power concerns the 'differential and graded positioning of participants' (Gillings *et al.* 2008: 129) within the ritual practices of the Stonehenge landscape, for not only was the processional order established by the formalised approach of the avenue linking Stonehenge with the River Avon replicated through the contrasting experiential frameworks generated by the architectural configuration of the structure, but those proceeding to the deep space of its centre would have had their presence amplified by the megalithic façade forming the south-western apex of its inner horseshoe setting (Barrett 1994: 43-45). Likewise, at Durrington Walls, not only does its connecting avenue with the Avon terminate at the Platform fronting the entrance to the Southern Circle (Parker Pearson *et al.* 2007: 633), but those associated with the activities of its enclosed space would have had their processional presence amplified by the megadendric façade of its timbered settings before continuing to the centre. In each case, the power to define the meaning of these structures and the form of their transmission is seen by post-

processualism as being determined by the graded ordering of processional space and the privileged access this gives a ritually differentiated minority to an 'area ... which few ... could ... ever have seen' (Bradley 2007: 141) during the critical turning points of their solstitial illumination.

It is these indications of difference within the social organisation of these structures that, however, remains underdeveloped within the post-processual reading of the Neolithic for in emphasising the subjective conditions of their engagement, the social is necessarily constructed through the contrasting experiential frameworks of the individual. As a result, no understanding is advanced concerning the source of these experiential frameworks and the asymmetrical relations of power they express as the epistemological privileging of the individual as an object of knowledge necessarily forecloses any consideration of their wider context. Yet, it is precisely this wider context that framed the processual reading of these structures advanced by Renfrew. Derived from the evidential frameworks of Orkney and Wessex, the increasing scale of these structures was seen by Renfrew as expressing tendencies of centralisation within the Neolithic consequent upon the progressively expanding scale of labour and resources required for their construction. Whilst, within Wessex, these centralising tendencies culminate in the sarsen settings of Stonehenge and the construction of Silbury Hill (Renfrew 1973b: 547-548), in Orkney they are exhibited through the building of Maes Howe, the Stones of Stenness and the Ring of Brodgar (Renfrew 1979: 212-214). In each case, the territorially segmented social structure of the Early Neolithic (Renfrew 1979: 214-217; 1973b: 546-547) is seen by Renfrew as being displaced by the emergence of chiefdoms whose centralised authority establishes the preconditions for that mobilisation of labour and resources necessary for their realisation (Renfrew 1979: 217-218; 1973b: 551-552). A similar reading is advanced by Sharples for the Orcadian Neolithic. Centred upon the changing mortuary practices associated with the Maes Howe form of passage grave (Sharples 1985: 69-70) and the locational tendency these structures have for land possessing good podzolic soils (Sharples 1985: 70), the spatially segmented social structure of the Early Neolithic (Sharples 1985: 70) is seen by Sharples as being transcended by the 'establishment of a central hierarchy'

(Sharples 1985: 72) whose control of ritual not only explains the economic integration of 'small territorial units' (Sharples 1985: 73) within the settlement agglomerations of the Late Neolithic necessary to the working of these glacially heavier, but more productive soils (Sharples 1985: 70), but their cultural integration through the subsumption of the individual within new forms of mortuary structure that were themselves situated in 'easily accessible locations' (Sharples 1985: 71) at the centre of the agricultural landscape (Sharples 1985: 70) since it was through this process of centralisation that the 'massive investment of ... labour' (Sharples 1985: 72) required by the 'appearance of henges and stone circles' (Sharples 1985: 72) could be met.

It is this attempt to position these structures within the wider context of the Neolithic that is, however, rejected by post-processualism for underlying these approaches is the modernist conception of the social as a structured totality. In each case, the political and cultural configuration of the Neolithic is read through the determining framework of the economy since it is through its capacity to generate that release of labour and resources necessary to the realisation of these structures that these tendencies of centralisation are expressed (Richards 1998: 519-520). Similarly, in privileging the final form of these structures, emphasis is necessarily placed on their intended function rather than on the process of construction itself and the understanding this gives of the social and its forms of organisation (Richards 2004a: 72-74). Indeed, it is this alternative reading of the social that, for Richards, is conveyed through the circular architecture of the Orcadian Neolithic as the geological composition of the sandstone monoliths defining the Stones of Stenness and the Ring of Brodgar suggests that rather than being 'derived from a single location' (Richards 2004b: 105), they were instead extracted from a series of 'different megalithic quarries situated across Orkney' (Richards 2004b: 106). As a result, rather than representing the 'development of a centralised authority structure' (Richards 1998: 520), these structures are instead seen by Richards as expressing the motivational agency of disparate social groups (Richards 2004b: 106) whose respective histories and associations of place are reproduced through the construction of these sites as a microcosm of the Late Neolithic social world (Richards 2004b: 110).

Indeed, for Pollard, there is 'no reason to see monument building as ... symptomatic of a ranked society' (Pollard & Reynolds 2002: 121) as there is 'little in the record ... to support the notion of chiefdoms or similar hierarchical social formations' (Pollard & Reynolds 2002: 121). However, it is precisely this reading of the social that is qualified by the evidential base. Thus, in considering the low number of individuals represented by the mortuary assemblages of the Early Neolithic, Atkinson concluded that rather than functioning as the 'mausolea of a whole ... population' (Atkinson 1961: 299), their use was instead intended for 'only ... one small fraction of it' (Atkinson 1961: 299) – thereby suggesting that the 'structure of Neolithic societies ... may have been a great deal less egalitarian than the lack of differentiation in their artifacts might lead us to suppose' (Atkinson 1961: 299). Supporting this interpretation is not only the differentiated grouping of skeletal remains along lines of age and gender at the West Kennet long barrow, but the presence of similar practices within the Cotswold-Severn chambers of Parc le Breos Cwm, Giant's Caves, Notgrove and Lanhill (Darvill 2004: 153). Clearly, these divisions suggest some form of differentiation within the Neolithic and it is this that post-processualism articulates through the emphasis it accords to the spatial and sensory regulation of the individual within the architectural configuration of these structures. However, in advancing a conception of 'construction as ... an act significant in its own right' (Gillings & Pollard 2004: 50), the social is necessarily read through the relations constituted by its motivationally induced practices such that, rather than providing any understanding of 'what was going on socially and politically' (Fleming 2004: 145), explanation is, instead, centred upon the perceived 'networks of ... obligation and debt' (Richards 2004a: 76) informing the participatory mobilisation of a population whose collective effort in 'bringing about a monumental transformation of place' (Gillings & Pollard 2004: 51) is reflected in the composite nature of these structures (Richards 2004b: 108).

Underlying such explanation is the epistemological separation of the cultural from the economic consequent upon the post-processual reaction to a totalised reading of the Neolithic and the emphasis this accords to the economy in determining the fundamental character of the social. It is this that explains the

current indifference exhibited by post-processualism to any 'interest in social organization' (Fleming 2004: 145) for rather than representing the cultural expression of an underlying movement at the level of the economy, these structures are necessarily separated from any relation with it. It is the adequacy of this separation and the knowledge it produces that is, however, qualified by the evidence for economic change and the understanding this gives of the Neolithic in terms of the 'interconnectedness ... of past reality' (Fleming 2004: 146). Indeed, it is precisely this conception of the past that is implicitly acknowledged by post-processualism concerning the differentiated positioning of the individual within the experiential frameworks of these structures and the asymmetrical relations of power they express. However, in privileging the cultural as a field of knowledge, the contextual framework for understanding these contrasting forms of engagement is necessarily displaced through the consequent positioning of these structures within the generalised 'narratives of prehistoric mind-sets ... and cosmological schemes' (Fleming 2004: 145) informing the post-processual recovery of its lived existence. It is the theoretically limiting effects generated by this movement in knowledge and its form of production that challenges the efficacy of a reading centred upon the conceptual framework of the individual for rather than reducing the social to the cultural, there is instead a need to locate the cultural within the social since it is through a conception of the Neolithic as an integrated totality that the conditions are established for the development of a 'more robust social archaeology' (Fleming 2004: 146) than that currently afforded by its cultural framing.



## **Chapter 6. Reframing the Neolithic.**

### **6.1 Post-processualism and the postmodern inflection of contemporary archaeological theory.**

Impeding this movement to a more robust social archaeology is the ‘changing nature of modern social *thought*’ (McLennan 1992: 328) consequent upon the emergence of postmodernism as a critical reaction to the Enlightenment and its promise of progress through the cultural privileging of science and reason as a superior form of knowledge production. Indeed, it is this promise and its realisation that not only frames the history of archaeology as a modernist discipline, but informs the nature of its break with antiquarianism since it was through the advent of new analytical methodologies centred upon the investigative procedures of a scientific rationalism that both the underlying coherence of the past and the relation it has with the present was rendered accessible to knowledge. It is these procedures and the knowledge they produce that is, however, challenged by post-processualism for whilst such methodologies have ‘proved ... useful ... in making sense of the past ... it is undeniably disturbing that the means through which we address alien cultural contexts are ones that are so intimately tied to our own historical conditions’ (Thomas 2004: 63). Instead, in order to ‘write about pre-Enlightenment people’ (Fleming 2006: 269) it is necessary for archaeology to abandon its ‘post-Enlightenment attitudes’ (Fleming 2006: 269) since it is only by fundamentally reorienting the ‘very form and content of ... reflection itself’ (McLennan 1992: 329) that both the underlying essence of the past and its distinctiveness from the present is opened to knowledge.

In seeking to ‘transform archaeology ... with new ... ways of working’ (Thomas 2004: 224) post-processualism can consequently be seen as articulating ‘archaeology’s version of post-modernism’ (Fleming 2006: 268) and the emphasis this accords to the changing ‘foundations of modern social *thought*’ (McLennan 1992: 330) consequent upon the movement to a ‘post-modern era, in which many of the principal features of modernity are withering away’ (Thomas 2004: 223). It is this movement beyond the historical conditions of

modernity that is seen by postmodernism as undermining the 'nature of modern knowledge' (Hall *et al.* 1992: 1) as the fragmentation of its institutional forms under the current phase of globalisation necessarily challenges the continuing relevance of the Enlightenment and its conception of the social as a bounded totality that is itself capable of being captured and reproduced in thought. Rather than reading the social through the totalising frameworks of modernist knowledge, the 'rapid and extensive transformation' (Hall *et al.* 1992: 9) of modernity is instead seen as demanding new cognitive models whose conceptual frameworks go beyond those of the Enlightenment in their ability to construct an 'entirely different way of *reflecting* on ... society' (McLennan 1992: 328).

It is this crisis in a 'whole way of *understanding* the social world' (McLennan 1992: 328) that explains the emergence of post-processualism within contemporary archaeological theory for if archaeology has its 'very existence ... tied to a set of historical conditions that are presently vanishing' (Thomas 2004: 223), then the surpassing of modernity necessarily renders its foundations obsolete. Hence the post-processual reaction to a reading of the past through the totalising frameworks of modernist knowledge and the way these position its material traces within a metanarrative of progress whose unfolding gives modernity a sense of itself in terms of the 'origins of developments that are not yet complete' (Thomas 2004: 31). It is this relation that modernity has with the past that is opposed by post-processualism for rather than rendering it familiar through the need modern societies have to 'understand how they have come to be as they are' (Thomas 2004: 41), there is instead a need to liberate the past from the 'scaffolding of modern thought' (Thomas 2004: 223) since it is only by rendering it unfamiliar that its essential difference is recoverable to knowledge. Hence the current movement in contemporary archaeological theory to an interpretative reading of material culture and the emphasis this accords to the individual as a conceptual framework for engaging the past since it is only by recovering those meanings embedded within its material remains that archaeology is capable of capturing and reading the past through the strangeness of its lived existence.

It is this movement in knowledge and the implications it holds for the continuing relevance of the Enlightenment that is, however, qualified by Giddens for rather than entailing the abandonment of its central tenets, the emergence of postmodernism can instead be seen as expressing the 'self-clarification of modern thought' (Giddens 1990: 51) consequent upon the changing character of modernity itself. As a result, rather than signifying a break with modernity, postmodernism is instead seen by Giddens as not only being contained within it but, through its questioning of the Enlightenment, expresses the contemporary manifestation of a critical reflexivity that has been present throughout the history of modern thought itself (Giddens 1990: 47-49). Indeed, for Thomas, 'modern societies are unusual in recognising their own material and social conditions as being unlike those of the past' (Thomas 2004: 2) and it is this capacity that modernity has to be 'self-aware' (Thomas 2004: 42) that explains the recurrent punctuation of its history by a series of 'counter-modern' (Thomas 2004: 42) moments within it.

Thus, within the Enlightenment itself, whilst the idea of the 'ignoble savage' was used to inform a stadial conception of progress, whose teleological unfolding culminated in the modern social formations of the West, Rousseau, writing in *The Social Contract* of 1762, advanced the oppositional notion of the 'noble savage' to present a critique of progress centred upon the perceived loss of innocence arising from the movement out of an original state of nature (Thomas 2004: 81-82; Hall 1992b: 311; Hamilton 1992: 45). Similarly, within the social formations of the West itself, the costs of progress associated with the increasing rationalisation of social life not only underwrote the emergence of Romanticism as a critical reaction to the effects of industrialisation during the eighteenth century (Thomas 2004: 228; Bocock 1992: 261), but informed the subsequent critique, advanced by Marx, concerning the estrangement of labour under capitalism through the concept of alienation in the *Economic and Philosophical Manuscripts of 1844* as well as Durkheim's discussion of anomie in *Suicide: A Study in Sociology* [1897] as a state of 'normlessness' within the individual consequent upon the progressive erosion of those bonds that had previously defined the organic solidarity of the past (Bocock 1992: 261-263). Likewise, in *The Protestant Ethic and the Spirit of Capitalism* [1904-5], Weber

saw the transition to modernity as resting upon a process of '*Entzauberung der Welt*', or disenchantment with the world, as the increasing rationalization of more and more areas of life necessarily entrapped the individual within an 'iron cage' of bureaucracy, whose instrumental rationality and values of technical efficiency rendered social life devoid of any significant meaning (Bocock 1992: 256-257).

Framing this conception of modernity as a loss of meaning is the broader philosophical nihilism of Nietzsche [1844-1900] and its repudiation of the Enlightenment claim to science and reason as a foundation for all social values. Rather than providing a framework of shared meaning, the presence of such values was instead seen by Nietzsche as representing 'masks' or 'fictions' through which powerful sectional groups pursued and realised their own interests such that rather than delineating any 'objective distinction between good and evil' (Bocock 1992: 263), the values of western civilisation were instead seen as being incapable of supplying modernity with any form of 'moral centre' (Bocock 1992: 263) as there could be 'no grounds for making claims ... which everyone could accept' (Bocock 1992: 256). As a result, modernity had effectively 'fallen into a state of cultural crisis' (Bocock 1992: 256) and become nihilistic for whilst the privileging of science and reason had rendered the social formations of the West technologically advanced, in the 'sphere of moral philosophy and values, European civilization ... had nothing positive to say' (Bocock 1992: 256).

It is this nihilistic reading of the Enlightenment conception of progress through science and reason that underwrites the critical reflexivity of the twentieth century. Thus, writing in the aftermath of the First World War, Freud, in *Civilization and its Discontents* [first published 1930], saw the psychological experience of modernity as engendering a 'strange attitude of hostility to civilization' (Freud 1963: 24), for rather than delivering progress, the use of science and technology in facilitating the mass slaughter of its trench warfare had not only 'challenged the idea of reason' (Thomas 2004: 48) itself but produced a 'deep and long-standing dissatisfaction with the then existing state of civilization' (Freud 1963: 24) amongst the populations of western Europe.

Rather than advancing social life, both the impact of the conflict and extent of its carnage had, instead, caused these populations to become estranged from any belief in the gains expected from science and reason, and it was this hostile reaction to the perceived benefits of civilisation that, for Freud, was manifested psychologically through the increasing incidence of neurosis as a fundamental condition of modern existence (Bocock 1992: 264). Similarly, the technical application of science in the pursuit of the Holocaust during the Second World War was seen by the Frankfurt School of critical theory as expressing the 'dark side' of progress consequent upon the degeneration of modernity into a 'one-dimensional' form of culture centred upon the dominance of technical reason (Bocock 1992: 267), for rather than providing any form of moral constraint the Enlightenment 'belief that science was objective and value-free' (Thomas 2004: 49) had, instead, had the reverse effect of severing its 'practice ... from any consideration of its ethical content' (Thomas 2004: 49). It was this subversion of ethical thought that, for the Frankfurt School, had 'crippled and distorted the promise of Enlightenment' (Bocock 1992: 266) as the moral vacuum created by this conflation of reason with 'scientific and technological ways of thinking' (Bocock 1992: 266) not only established the conditions through which the 'totally administered' societies of European fascism could emerge and develop, but rendered the instrumental rationalism of the Holocaust thinkable within them (Thomas 2004: 49).

It is this history of critical reflexivity that, for Giddens, postmodernism continues through its questioning of 'foundationalism in epistemology' (Giddens 1990: 47) for whilst the current fragmentation of modernity is seen as undermining any 'systematic knowledge of ... social development' (Giddens 1990: 46-47), the notion that modernity is itself entering a new phase of post-modernity is to accord the history of society with precisely that degree of unity and coherence 'declared (now) to be impossible' (Giddens 1990: 47). It is this underlying contradiction within the very self-definition of postmodernism itself that, for Giddens, positions its appearance within the 'intellectual history of modernity as constantly oscillating between ... poles ... of Enlightenment and anti-Enlightenment' (McLennan 1992: 346) for rather than going beyond the cognitive frameworks of modernist knowledge, the significance of its reaction to

foundationalism in thought is instead seen to reside in its qualification of history as the teleological unfolding of progress (Giddens 1990: 50). It is this qualification of history as the rational appropriation of progress rather than the cognitive frameworks of modern thought as such that, for Giddens, represents postmodernism as the contemporary expression of that 'reflexivity inherent in modernity itself' (Giddens 1990: 49), for whilst the 'trajectory of social development ... away from ... modernity towards a new and distinct type of social order' (Giddens 1990: 46) articulates the Enlightenment conception of the social as a coherent totality whose scientific reading is capable of rationally capturing its complexity as a whole, it is the perceived indeterminacy of a transition that postmodernism 'does not show ... exists' (Giddens 1990: 46) that is seen by Giddens as reflecting the increasing awareness that modernity has under its current 'phase of ... radicalisation' (Giddens 1990: 51) that the 'unrelenting change of the modern era' (Thomas 2004: 40) is not necessarily 'focused and directional' (Thomas 2004: 40).

It is this reflexive understanding of history as having 'no intrinsic form and no overall teleology' (Giddens 1990: 50) that post-processualism articulates as the 'critical voice ... of modernity' (McLennan 1992: 344) within contemporary archaeological theory for framing its reaction to the epistemological frameworks of the Enlightenment is the modernist reading of the social as a metanarrative of progress. Indeed, it is precisely this conception of history as having an 'essential meaning and *direction*' (McLennan 1992: 344) that not only underwrites Childe's attempt to combine the historic and prehistoric periods within a 'smoothly continuous historical narrative' (Childe 1958: 73) centred upon an 'economic interpretation of ... the archaeological record ... as documenting a directional process' (Childe 1958: 71-72) whose origins can be traced back to the agricultural subordination of the natural world consequent upon the Neolithic transcendence of savagery (Childe 1958: 71-72), but similarly inflects both Renfrew and Sharples' account of the Neolithic as exhibiting a 'progressive, linear ... trajectory of social evolution' (Richards 1998: 516-517) centred upon the expanding capacity of agriculture to support that release of labour required by the increasing scale of its monumental architecture for, in each case, the past is rendered coherent through the

determining framework of the economy – whose temporal development gives history a recognisable form 'leading to one predictable ... result' (Hall, Held & McLennan 1992: 10).

It is this reading of history as progress through the determining causality of the social rather than the epistemological frameworks of the Enlightenment as such that represents the 'post-modern moment' (McLennan 1992: 343) within contemporary archaeological theory and explains the 'cultural turn' associated with the emergence of post-processualism towards an interpretative reading of the past and its material culture. However, if, as the archaeological variant of postmodernism, post-processualism can be seen as 'modernity coming to understand itself rather than the over-coming of modernity as such' (Giddens 1990: 48), then the significance of its intervention lies in its '*questioning* of modernist ideas from within a radicalized modernity' (McLennan 1992: 345). It is this that post-processualism articulates through its unsettling of the past as a metanarrative of progress and suggests that rather than going beyond the Enlightenment, it is the inflection of its epistemological frameworks with the modernist conception of history as the progressive 'unfolding ... of some underlying process' (Thomas 2004: 84-85) that represents the 'inherently self-critical aspect of ... modernity' (McLennan 1992: 344) within contemporary archaeological theory. It is this reflexive understanding of progress that establishes the conditions for the recovery of the Neolithic as an integrated totality for, in deconstructing its reading as a 'point of origin for metanarratives that extend into the future' (Thomas 2004: 41), not only is its distinctiveness retained as an object of knowledge, but the 'cultural turn' associated with its separation from the present contextualised through the repositioning of its understanding within the changing dynamic configuration of the Neolithic consequent upon its economic and cultural interface with the natural world.

## 6.2 The Neolithic and the hegemonic positioning of Wessex in contemporary archaeological thought.

Accompanying the constraints imposed by postmodernism on an integrated reading of the Neolithic are the distorting effects generated by the hegemonic positioning of Wessex in contemporary archaeological thought since it is through the evidential framework of central southern England that its current framing as a culturally induced process of change centred upon an underlying continuity at the level of the economy is constructed. As a result, it is through the evidential framework of Wessex that the Neolithic is not only known as an object of knowledge but, through its representation as the indigenous assimilation of a novel material culture, whose elements symbolically express the presence of a new kind of subjectivity within the existing practices of the Mesolithic, forms the 'basis for a metanarrative' (Cooney 2000: 37) centred upon the 'assumption that the pattern of mobility seen in the interpretation of ... Wessex ... can be extended across the whole of ... Britain ... and ... Ireland' (Cooney 2000: 38).

It is this reading of the Neolithic through a metanarrative of Mesolithic continuity that has implications for the wider positioning of the evidential base in its relation to that of central southern England for, as Cooney notes, whilst:

"This is the area which has been the focus of most research ... and ... is critical in understanding the Neolithic in Britain ... the mobility model which is based on the evidence from a particular region has been extended to cover not only the whole of Britain but also Ireland. While Ireland is included in presentations of the British evidence at the same time the Irish evidence is underplayed, or, like evidence from regions of Britain itself that does not 'fit' this mobility model, it is seen as exceptional or peripheral rather than something that offers evidence for a different interpretation of the Neolithic." (Cooney 1997: 23)

For Barclay, underpinning this hierarchical ordering of the evidential base is the broader metropolitan structuring of archaeology around the interpretative



primacy of Wessex as the 'supposed cradle of the ... Neolithic in Britain' (Barclay 2001: 6) and the capacity it has to render the 'evidence from some areas ... more equal than others' (Barclay 2000: 282) such that rather than providing an alternative framework of understanding, the wider evidential base is instead read through the narratives of its southern-centric core. It is this metropolitan '*writing of prehistory*' (Barclay 2001: 15) that impedes a reading of the Neolithic as an integrated totality, for rather than exhibiting a 'damaged or otherwise incomplete archaeological record' (Barclay 2001: 14), it is through the absence of features present within the wider evidential base that its southern-centric core is not only able to represent itself as complete through an understanding of such features as having 'never ... been present' (Barclay 2001: 14), but simultaneously render their existence within the wider evidential base atypical through their deviation from the archaeological traces of the core. Hence the current reading of the Neolithic as a metanarrative of Mesolithic continuity, since it is through the 'absence ... of ... a ... settlement record' (Barclay 2004: 37) within the evidential framework of central southern England that the perceived disjuncture between the economic and the cultural is not only constructed and extended to cover the evidential base as a whole but, where evidence for such a record does exist, it is either seen as being of limited interpretative value or explained as the symbolic manifestation of new practices conducted within the underlying framework of a Mesolithic subsistence strategy.

It is this reading of the Neolithic through a 'generalized ... pattern of settlement, based on an area the evidence from which is consciously ... assigned a primacy' (Barclay 2000: 281) that is, however, not only contested by the wider evidential base, but remains underdetermined within the evidential framework of central southern England. Rather than supporting a metanarrative of Mesolithic continuity, the evidential base, instead, suggests that the cultural transformation of the social was synchronised with an accompanying movement at the level of the economy such that, rather than informing a process of indigenous acculturation, the appearance of its elements are instead indicative of a sharp disjuncture with it. Hence the complete disappearance of any Mesolithic assemblages from the archaeological record after 4000 BC. Indeed, even within the evidential framework of central southern England, evidence for

this movement is indicated through the stratified deposits of a natural shaft at Fir Tree Field, Dorset, where a Late Mesolithic layer containing microliths and a butchered deer bone dating to 4340-4040 cal BC was overlain by an Early Neolithic layer containing an ox scapula, sherds of Plain Bowl pottery and a hearth whose charcoal gave a combined radiocarbon determination of 4050-3710 cal BC (Schulting 2000: 31; Allen 2000: 40-41; Green & Allen 1997: 126). Coupled to the stable isotopic evidence for dietary change, the Continental antecedents of its domesticates and the multi-phase character of its mortuary structures which, when combined with the integrated landscapes of western Britain and Ireland, the evidence for the anthropogenic modification of soil in the Orcadian Neolithic and the recovery of large assemblages of cereal in eastern Scotland and northern England, clearly suggests that rather than being contained within an underlying framework of economic continuity, the inception of the Neolithic was both rapid and total in its effects.

It is the sheer weight of this evidence that fundamentally qualifies the adequacy of a Wessex-oriented prehistory centred upon the indigenous assimilation of a new material culture consequent upon its contact with a continental Neolithic presence for whilst the settlement stability afforded by the littoral positioning of its Late Mesolithic groupings had established the conditions for the subsequent adoption its elements through the developing complexity of a material culture whose practices involved the cultural treatment of the dead and their placement in formal cemeteries, the severing of the land bridge with Britain had not only rendered its Mesolithic isolated and insular in character, but devoid of that complexity in material culture previously exhibited at the Early Mesolithic sites of Aveline's Hole and Star Carr.

It is this absence of any Mesolithic antecedents for a Neolithic presence coupled to the evidence for 'significant climatic change around 4000 cal BC' (Bonsall *et al.* 2002: 15) that points to an understanding of its emergence as resulting from the northward advance of some form of demographic movement. Indeed, it was precisely this reading of the Neolithic as the northward incursion of a continental demographic presence that had previously framed Childe's understanding of its movement as representing a bipartite process of

colonisation along the eastern and western seabords of Britain (Barclay 2004: 32). Centred upon the appearance of the Windmill Hill Culture as the first 'fully formed ... neolithic culture recognizable in the archaeological record ... of ... the British Isles' (Childe 1947: 34), not only were its defining traits seen by Childe as falling beyond the 'autochthonous development of any local Mesolithic culture' (Childe 1947: 40) but, through the preference it exhibits for 'upland sites ... cattle-keeping and ... flint-mining' (Childe 1947: 41), represents an 'outpost of the ... Western neolithic societies... beyond the Channel' (Childe 1947: 40-41). From this area of primary settlement, its presence is subsequently seen by Childe as spreading northwards through the eastern movement of its economy onto the chalk Wolds of Lincolnshire and Yorkshire (Childe 1935: 78-79) as well as westwards through the fusion of its elements with a 'megalithic faith' whose northward advance along the Atlantic façade of Portugal, Spain and France positioned Britain at the 'northern terminus' of a 'megalithic seaway' (Childe 1957: 322-326; 1935: 77-78). Here, the consistent presence of Windmill Hill type pottery and leaf-shaped arrowheads within the contrasting typological forms of its chambered tomb architecture (Childe 1947: 52; 1935: 24-25) was seen by Childe as signifying the northern spread of the Neolithic into western Scotland and Ireland through the appearance of distinct megalithic sects whose 'distribution of tombs ... indicates the channels of the religion's propagation and the area of its domain' (Childe 1947: 46).

A similar reading of the Neolithic was advanced by Piggott in *The Neolithic Cultures Of The British Isles* [1954]. As with Childe, not only was the primary Neolithic marked by the emergence of the Windmill Hill Culture as an 'immigrant Neolithic culture' (Piggott 1954: 17) within Mesolithic Britain, but its elements 'represent the ... virtual transference of ... traditions' (Piggott 1954: 369) derived from the Western Neolithic cultures of the European mainland. From this intrusive agricultural presence, the Neolithic is again seen as spreading northwards through the eastern movement of its elements along the 'Jurassic ridge ... between the Cotswolds and Yorkshire' (Piggott 1954: 102). However, in contrast to Childe, rather than representing the northward advance of a 'megalithic religion', the variant forms of chambered tomb architecture defining the spread of the Neolithic through western Britain and Ireland were instead

seen by Piggott as representing the seaborne movements of distinct populations, whose extent and limits of colonisation was marked by the increasing degeneracy in mortuary form consequent upon the inland dispersal of settlement from its initial points of entry (Piggott 1954: 126-7, 130, 134, 136, 157-159, 181-182, 193, 369).

Underpinning these accounts are the broader paradigmatic frameworks of culture-history dominant in the archaeological interpretation of the Neolithic during the first half of the twentieth century. Centred upon the 'concept of a culture, defined but not constituted by distinctive pottery and representing a people' (Childe 1958: 70), the spread of the Neolithic through the European mainland was read through the movements of specific populations whose constantly recurring traits could be mapped spatially and temporally through the archaeological record. It is the appearance of these traits within its primary areas of settlement that for Childe and Piggott links the inception of the British and Irish Neolithic to the demographic movements of the Western Neolithic complex of cultures in continental Europe. However, whilst identifying its continental prototypes, the 'precise definition of its immediate origins and antecedents' (Piggott 1954: 97) remained elusive as the 'dissolution of culture ... associated with transmarine settlement' (Childe 1947: 42) was seen by Childe as imbuing its character with a 'marked insularity when compared with its continental counterparts' (Childe 1947: 41) such that, for Piggott, its appearance could only be explained in terms of a generalised 'record of the arrival at various points of the long coastline of the British Isles of smaller or larger groups of colonists from varied regions of the Atlantic and Channel coasts of western Europe' (Piggott 1954: 15).

Whilst this search for the probable sources of the British and Irish Neolithic was the necessary corollary of an interpretative framework centred upon the demographic movements of specific populations, the 'bipartite colonization model of Childe and Piggott' (Barclay 2004: 41) continues to provide a 'viable narrative of origins' (Barclay 2004: 41) compared to that currently offered by a metanarrative of Mesolithic continuity. Indeed, it is this narrative of colonisation that is not only supported by the 'sudden ubiquity of Neolithic material culture in

Britain after 4000 BC' (Thomas 2008: 65), but explains the eastern and western continuation of those mortuary forms associated with the northern and north-western seaboard of the European mainland and the evidence these give for the presence of an interface between its Atlantic and cross-Channel routes of movement. Thus, located within the eastern distribution of the Clyde cairns of the Solway Firth are the timbered mortuary structures of Lochill and Slewcairn – with Lochill exhibiting a date range of '4250-3600 cal BC' (Cummings 2002a: 130). For Scott, these structures were seen as signifying the movements of 'Neolithic colonists ... from the east and south' (Scott 1969: 180) whose 'tradition of burial in ... a wooden ... chamber' (Scott 1969: 181) was translated into stone at the multi-phase site of Cairnholy I. Here, an initial 'protomegalithic' chamber resembling the timber-lined rectangular stone settings and wooden superstructures of the chambers at Lochill and Slewcairn was subsequently extended to form the features of a Clyde cairn through the secondary addition of an outer chamber, forecourt, façade and trapezoidal cairn (Noble 2006: 81, 83, 99, 112-113; Scott 1969: 181, 193-195) such that with its mixing of distinct architectural traditions, the final form of the structure can be seen as expressing the 'interface between wooden monuments to the east and ... stone-built monuments to the west' (Cummings 2002a: 140-141). A similar interface is exhibited within the Avebury region of central southern England. Here, the eastern distribution of Cotswold-Severn chambered barrows is contiguous with the western distribution of earthen long mounds to the east (Pollard & Reynolds 2002: 63). However, in contrast to its wider distribution, the 'cairns of the Avebury group appear ... to be the only cairns of the Cotswold-Severn group to have flanking ditches' (Corcoran 1969: 30). Not only is this feature 'common to earthen long barrows built on the Chalk' (Corcoran 1969: 30), but its architectural replication suggests that the 'ditched chambered cairns were built as a result of contact between two different traditions of mound construction' (Corcoran 1969: 30).

It is this reading of the Neolithic through the northward incursion of its elements that a more effective framework is provided for understanding the rupturing of the Mesolithic within the archaeological record. It is this alternative framework that is, however, opposed by the metanarratives of a Wessex-oriented

prehistory, for whilst there was clearly an indigenous presence, the 'suggestion of population movement of any kind as a process to explain the beginnings of the Neolithic appears to have gone totally out of favour' (Cooney 1997: 26) despite the absence of any mixed assemblages regarding the form of its interface with a new material culture (Schulting 2000: 30). Rather than informing a metanarrative of Mesolithic continuity, it is this demographic movement that the uniform appearance of the Neolithic as a 'rapid and ... interconnected phenomenon' (Schulting & Whittle 2003: 74) indicates for whilst 'radiocarbon dates on charred cereals suggest that the onset of crop cultivation in Britain and Ireland occurred no earlier than c. 3950 cal BC' (Brown 2007: 1050), the 'dating evidence for the origins of megalithic tombs ... show a small number of dates around c. 4000-3900 cal BC' (Brown 2007: 1048). Similarly, whilst the radiocarbon dating of domestic structures 'show a number of early dates between 4050-3950 cal BC and 3900-3800 cal BC' (Brown 2007: 1049), pottery traditions become 'established over most of Britain and Ireland between 4000-3800 cal BC' (Brown 2007: 1049).

It is this compressed temporal horizon that points to the need to reposition the Neolithic within the 'model presented from the 1930's to the 1970's or later' (Barclay 2004: 41) for rather than supporting a metanarrative of Mesolithic continuity, it is through the colonising frameworks of the past that a more effective understanding is advanced for the rapid and uniform spread of its elements across Britain and Ireland. This does not, however, imply a return to the culture-historic paradigms of Childe and Piggott. Indeed, as Bradley notes, one of the reasons why the search for the probable sources of the Neolithic continued to remain enigmatic was itself due to the 'geographical position of Britain and Ireland in relation to the Continent' (Bradley 2003: 219) and the way this allowed links to be formed with 'parts of mainland Europe that had few connections with one another' (Bradley 2007: 17). Instead, rather than tracing its inception through the colonising movements of specific populations, Case's formulation of its appearance as resting upon the small-scale incursions of 'emigrants ... from ... the north European coast' (Case 1969: 180) whose stable adjustments consolidate the footholds of an initial pioneering presence (Case 1969: 181) could 'perhaps be usefully dusted down' (Cooney 1997: 26) and

reworked in a 'more complex form' (Barclay 2004: 41), for not only does this position the Neolithic more effectively within its wider European setting, but explains the economic and cultural dissipation of the Mesolithic apparent within the archaeological record.

It is this movement in knowledge that is, however, impeded by the metropolitan structuring of the Neolithic around a universalist prehistory derived from the evidential framework of central southern England and the power it has to 'dismiss the reality of different and ... better evidence elsewhere' (Barclay 2000: 282). However, if post-processualism can be seen as expressing the inherent reflexivity of modernity within contemporary archaeological theory, then it is through such reflexivity that the conditions are established for an understanding of the Neolithic that goes beyond the 'distorting mirror hovering above Wessex' (Barclay 2000: 281), for in transcending its capacity to define 'what is the core and what is the periphery' (Cooney 1997: 29) not only is the Neolithic altered as an object of knowledge but, so too, is the understanding it gives of the evidential base. When combined with the postmodern qualification of history as the teleological unfolding of progress, it is this movement beyond the interpretative framework of a generalised metropolitan prehistory that the space is constructed for the reframing of the Neolithic within contemporary archaeological theory as the separation of the colonising frameworks of the past from their culture-historic inflection with origins not only recovers the Neolithic as an integrated totality but, in displacing its reading through the metanarratives of a modernist historiography, a contextual framework is similarly provided for the repositioning of its lived experience within the changing dynamic configurations of its economic and cultural interface with the natural world.

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